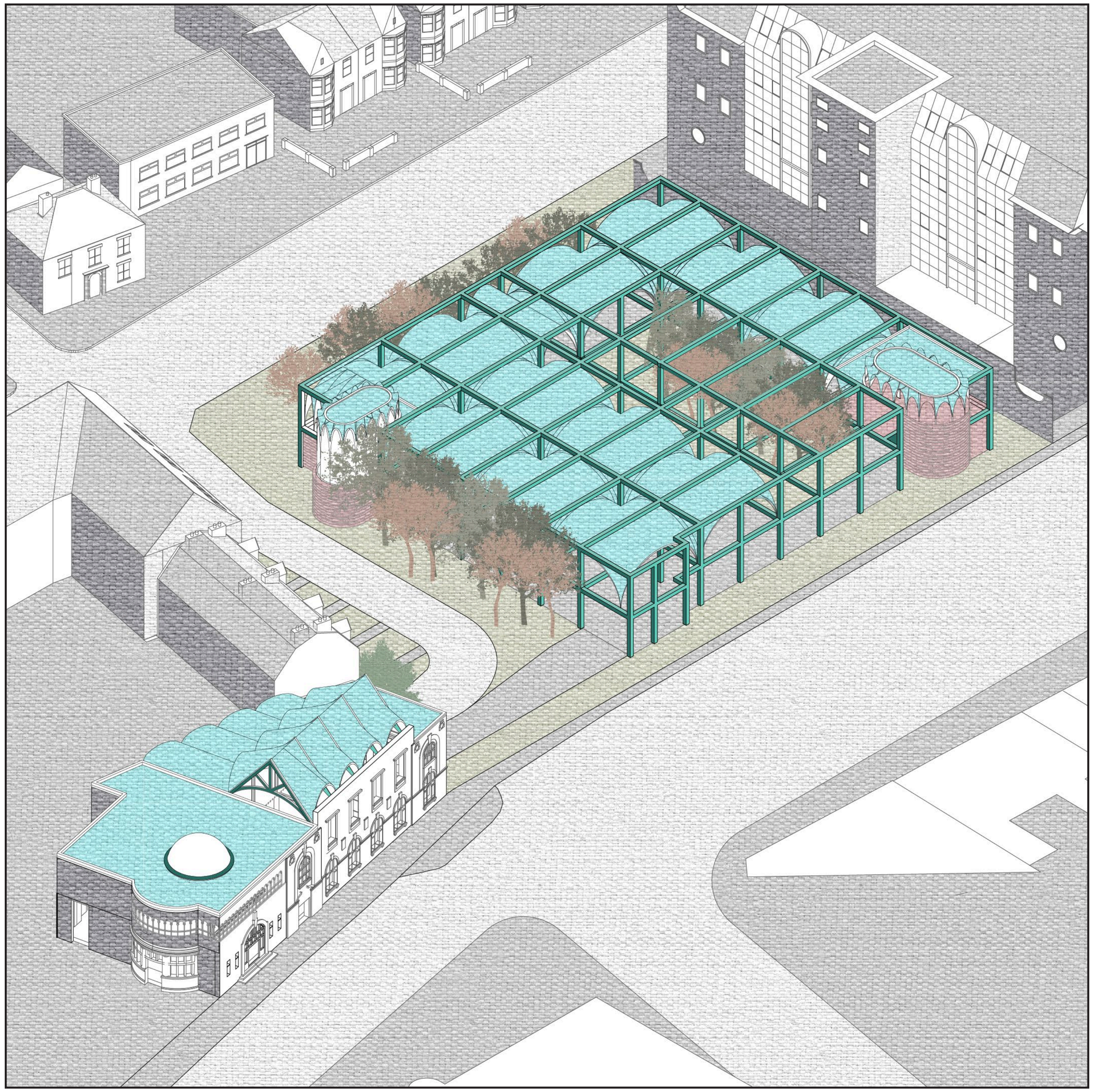
PATCHWORK

PALIMPSEST

Christian Swallow
Cs938

Patchwork = Composed of many different elements

Palimpsest = Reused or altered but still bearing visible traces of its earlier form

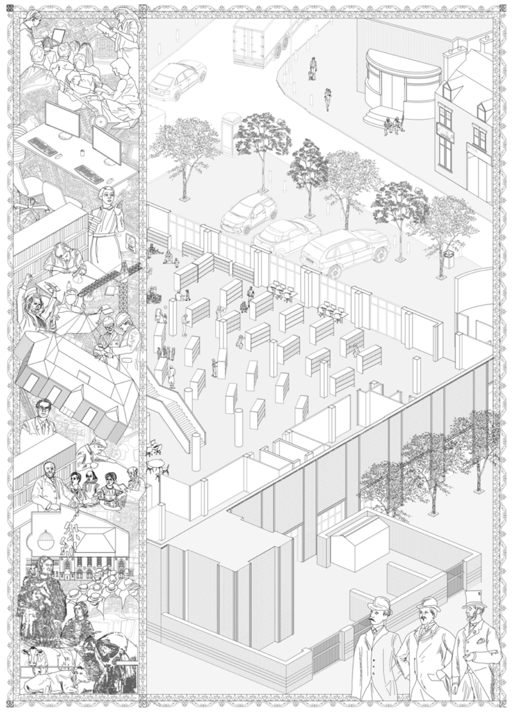


Final Proposal

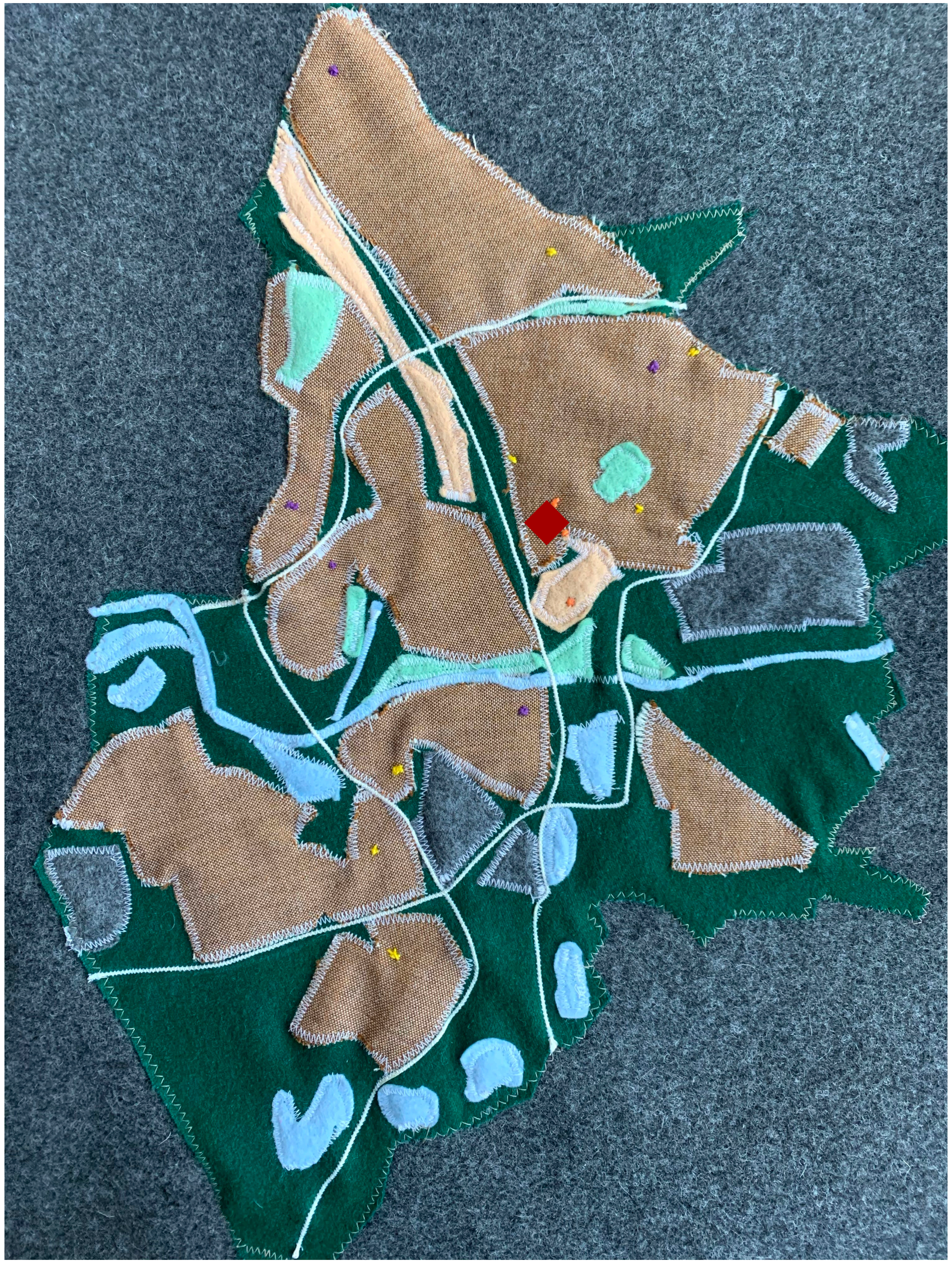
Isometric projection

1

PATCHWORK



Unravelling Peterborough



◆ Peterborough Central Library

◆ Water

◆ Greenspace

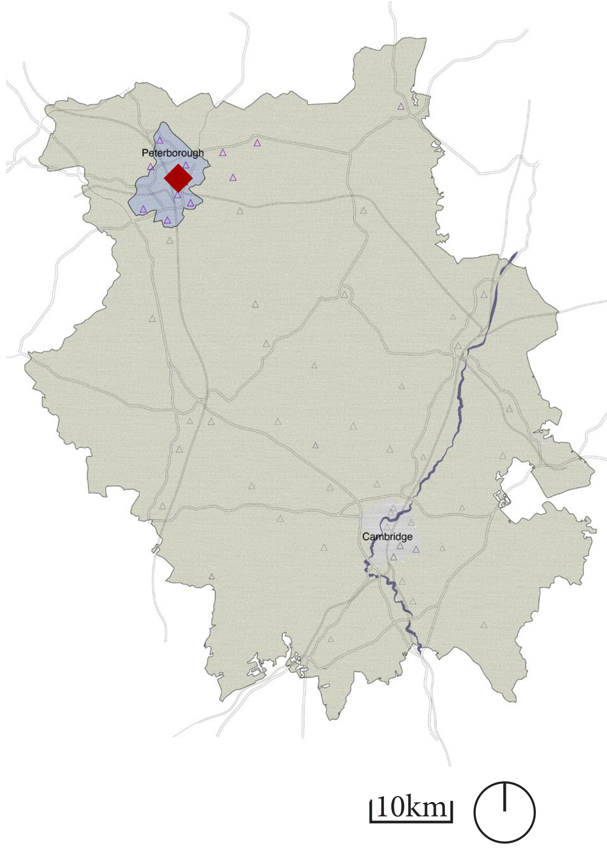
◆ Retail

◆ Industrial

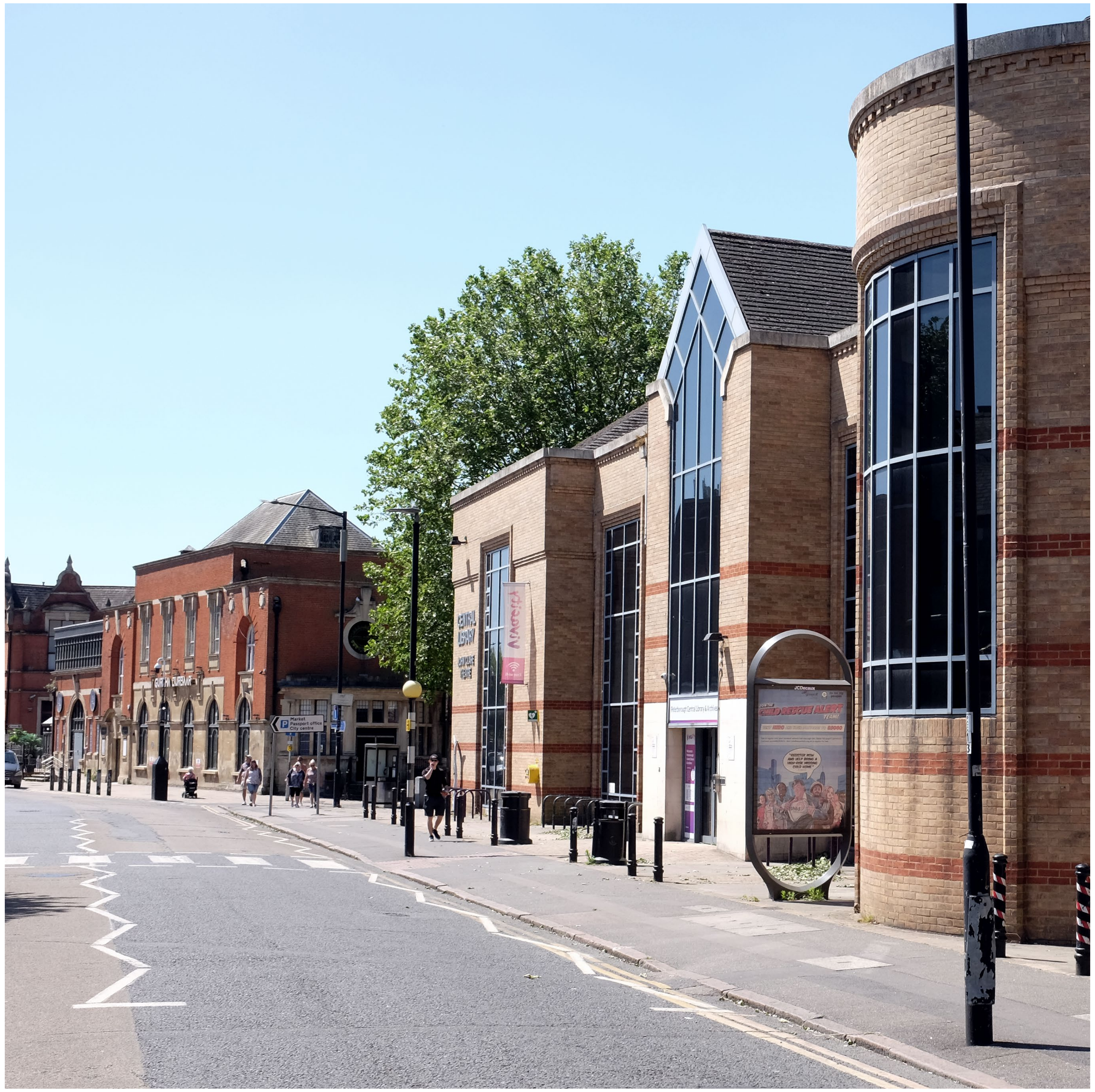
◆ Residential

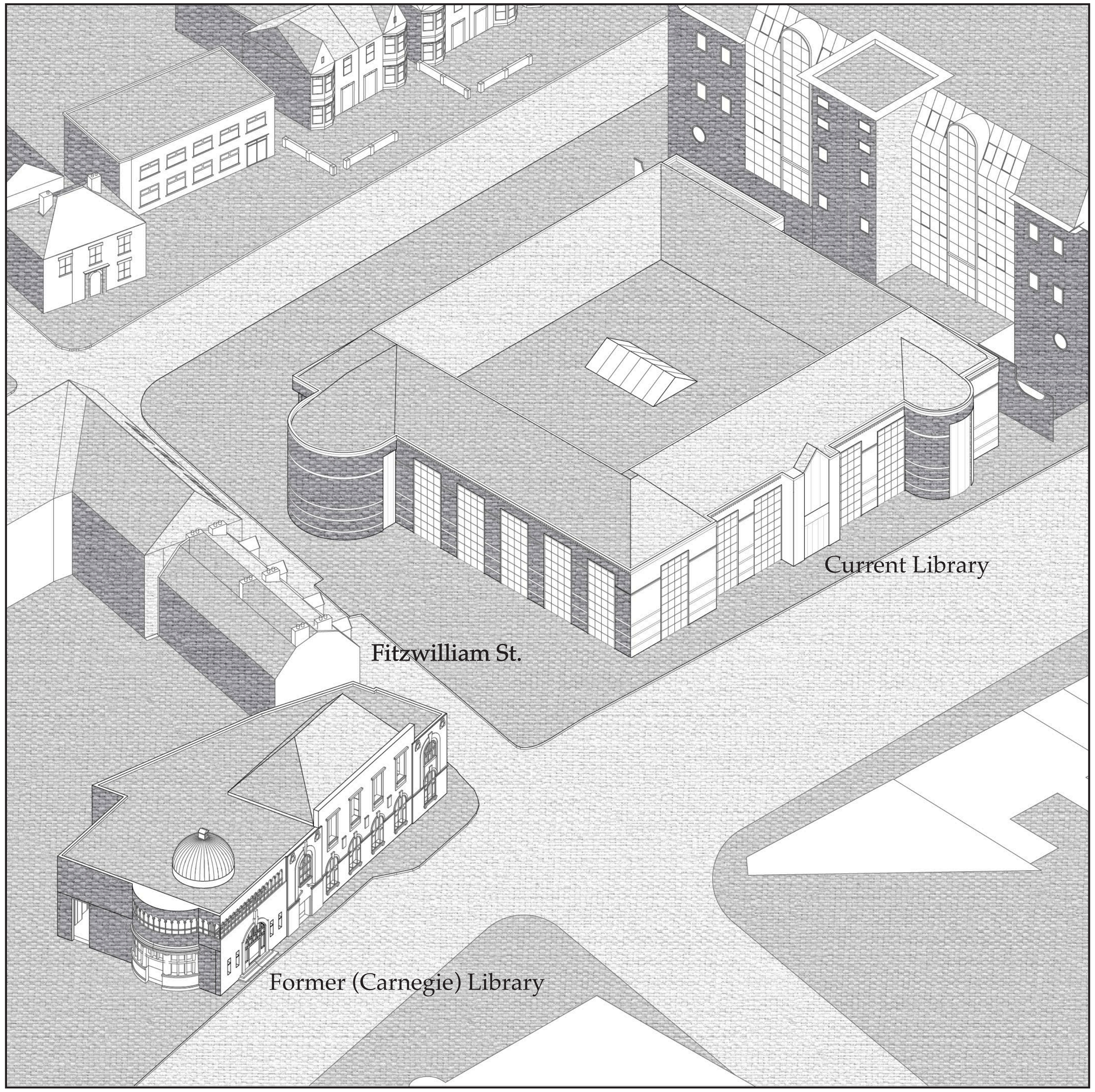
Patchwork map of Peterborough

Location



Map of Cambridgeshire

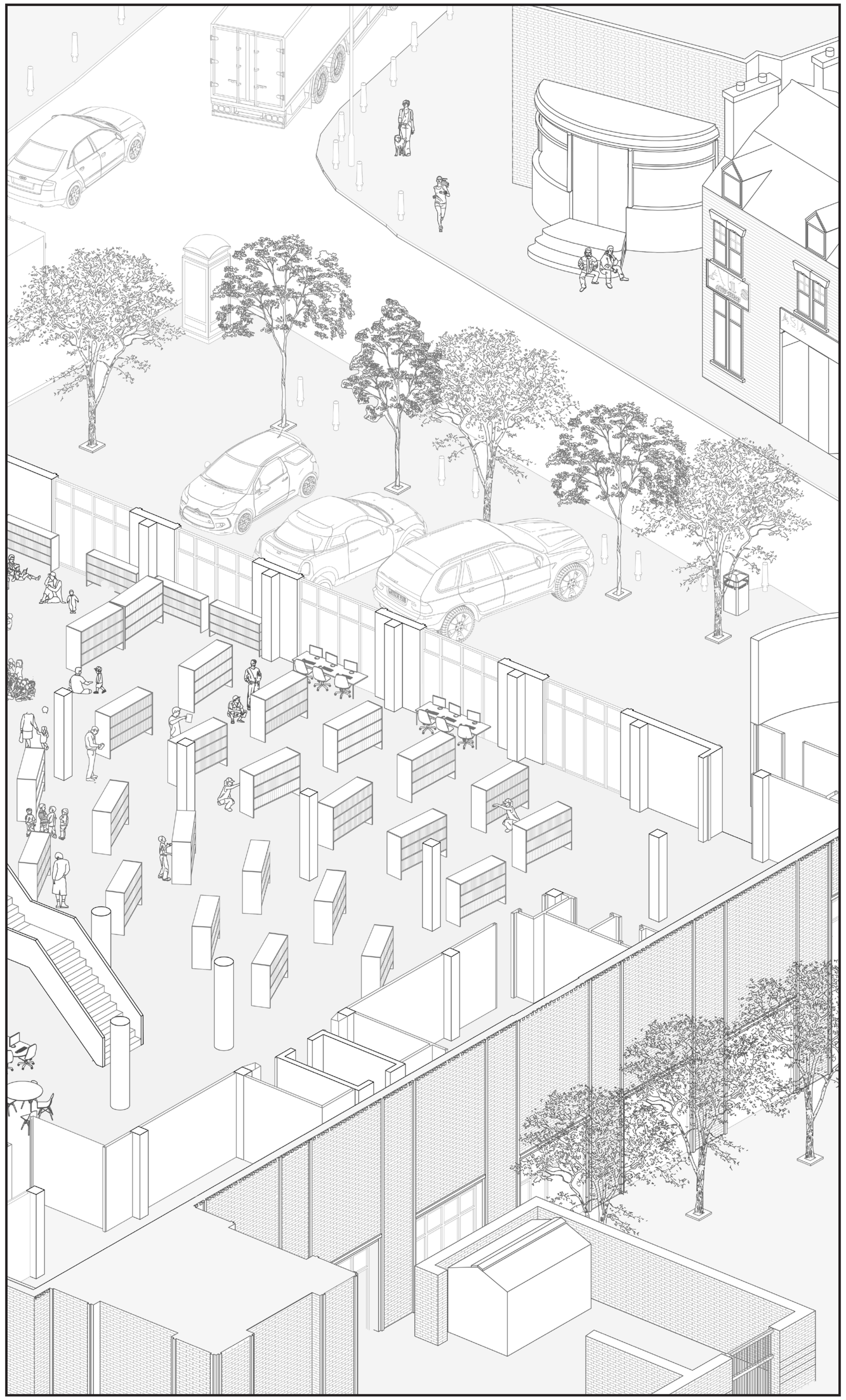




A neighbourhood of Libraries

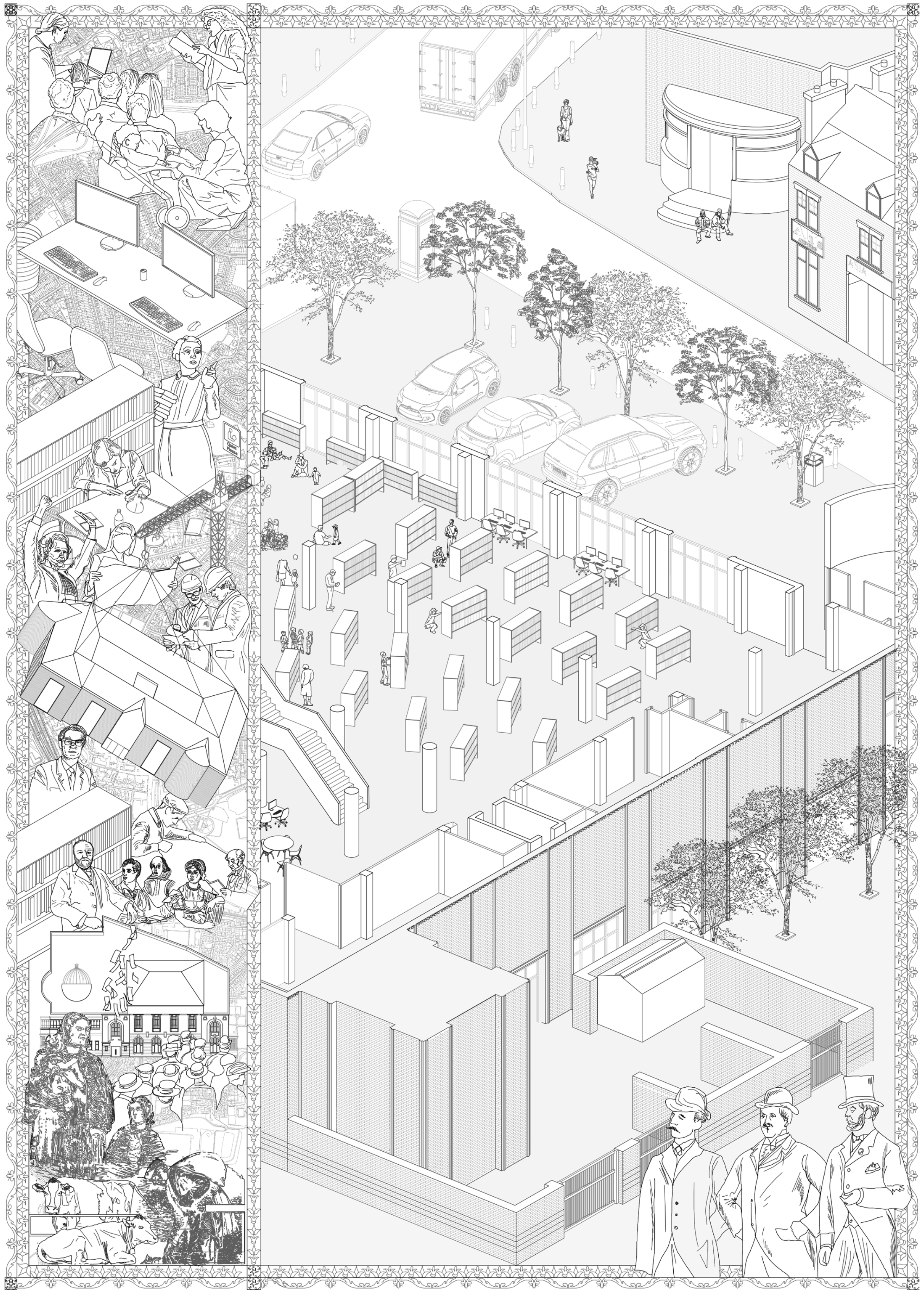
25m

Isometric of existing site



An innocuous civic building

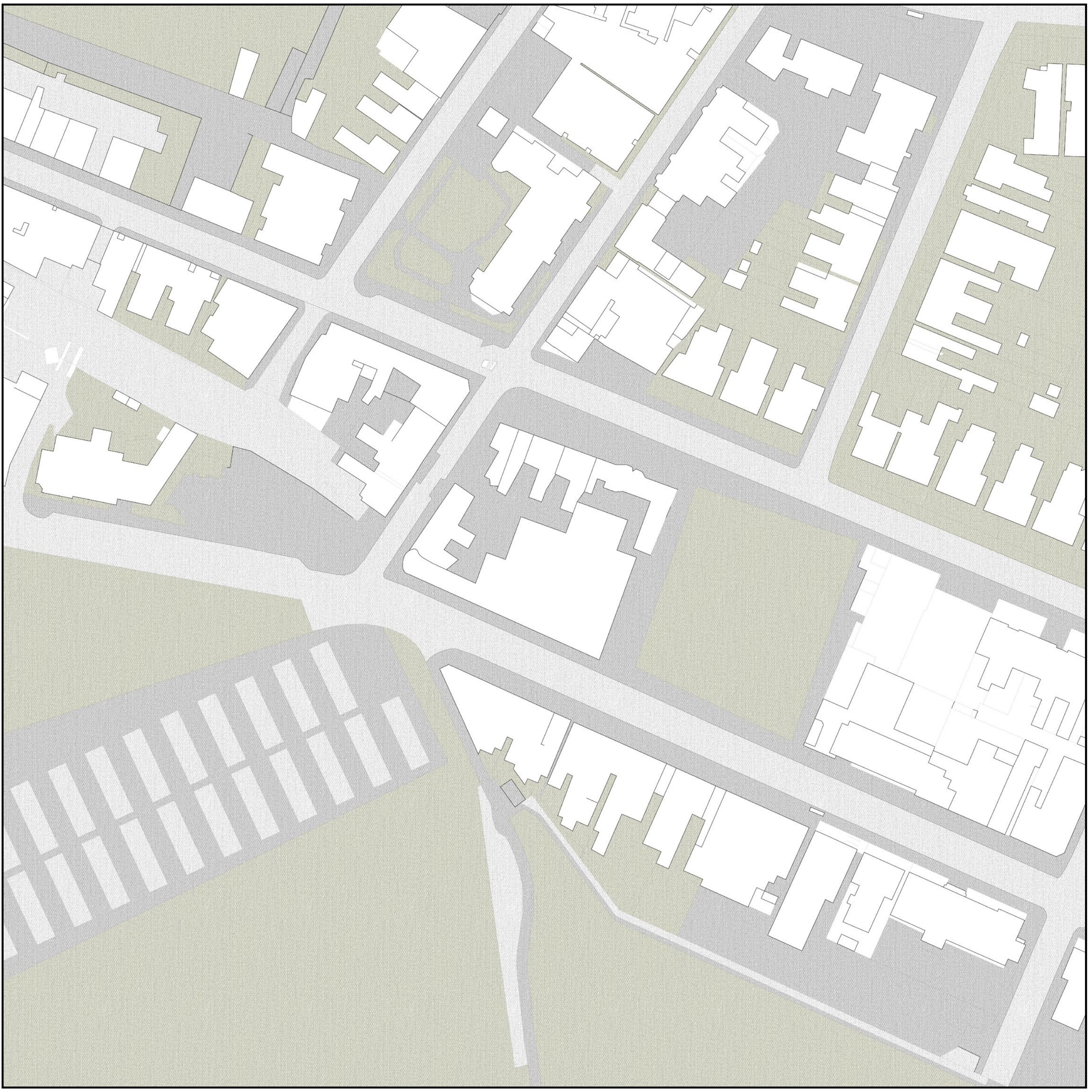
Isometric of existing library



A complex history

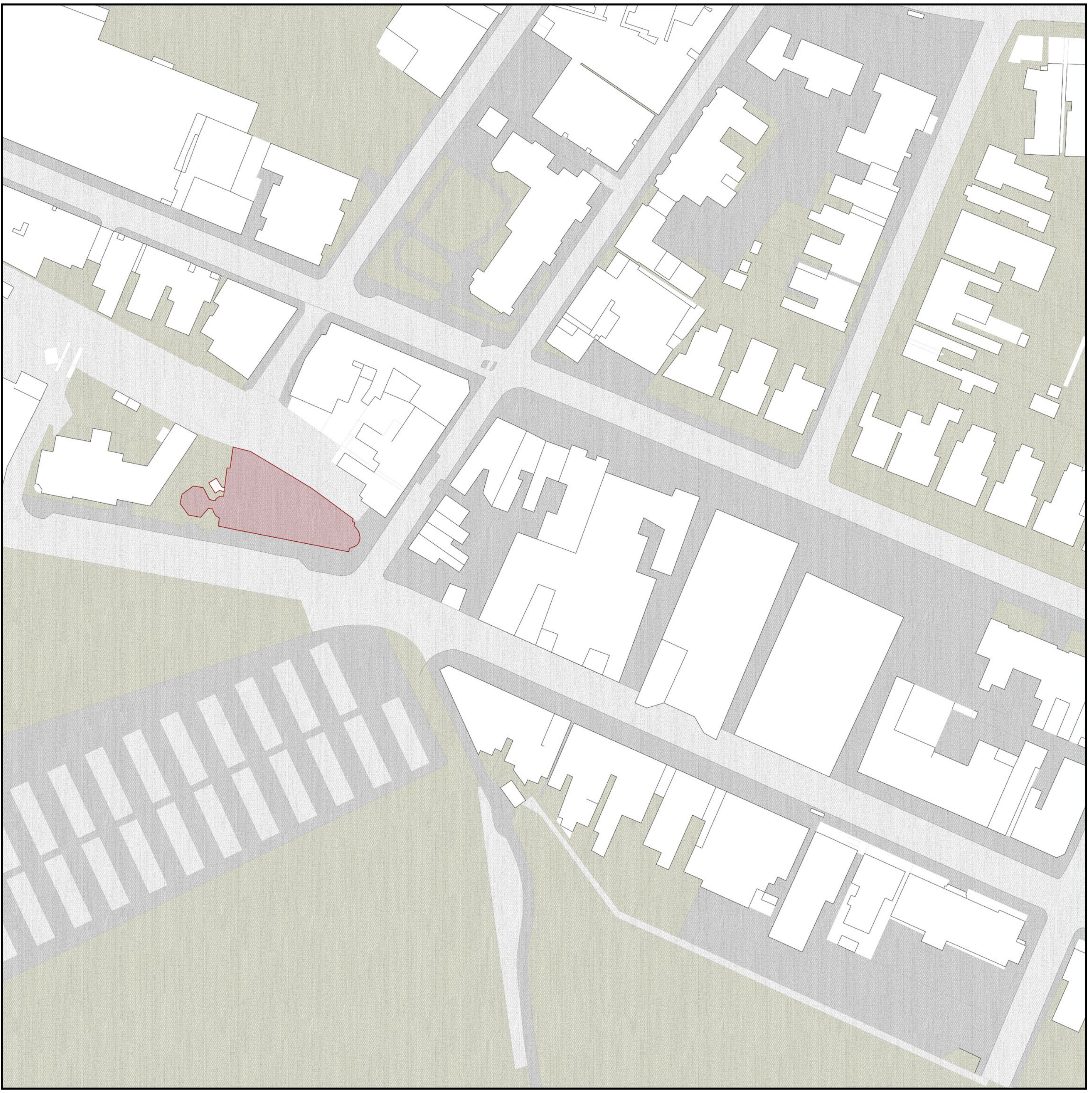
Miniature 1

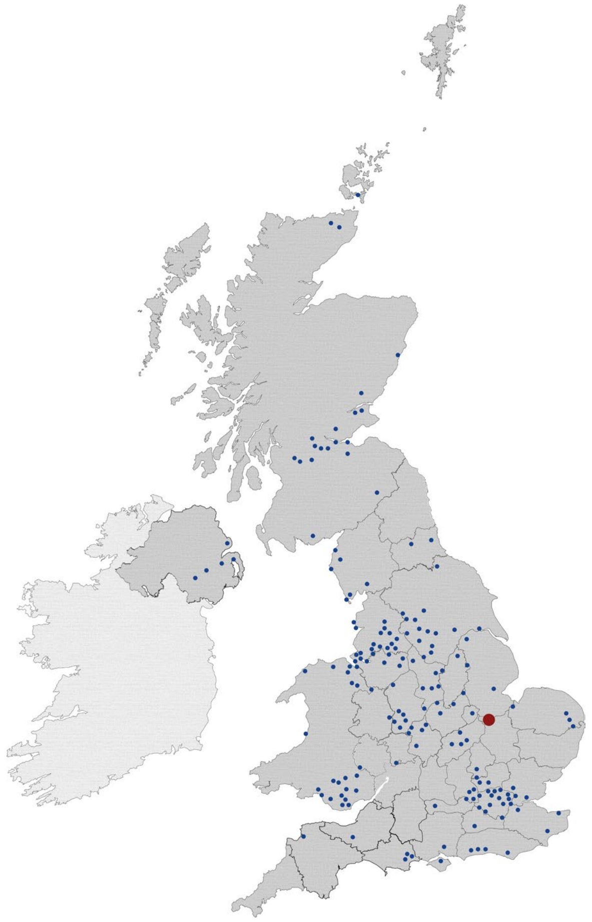
Manuscript Illumination,
Andrea Matteo 1519



1850

The area is on the periphery of the city

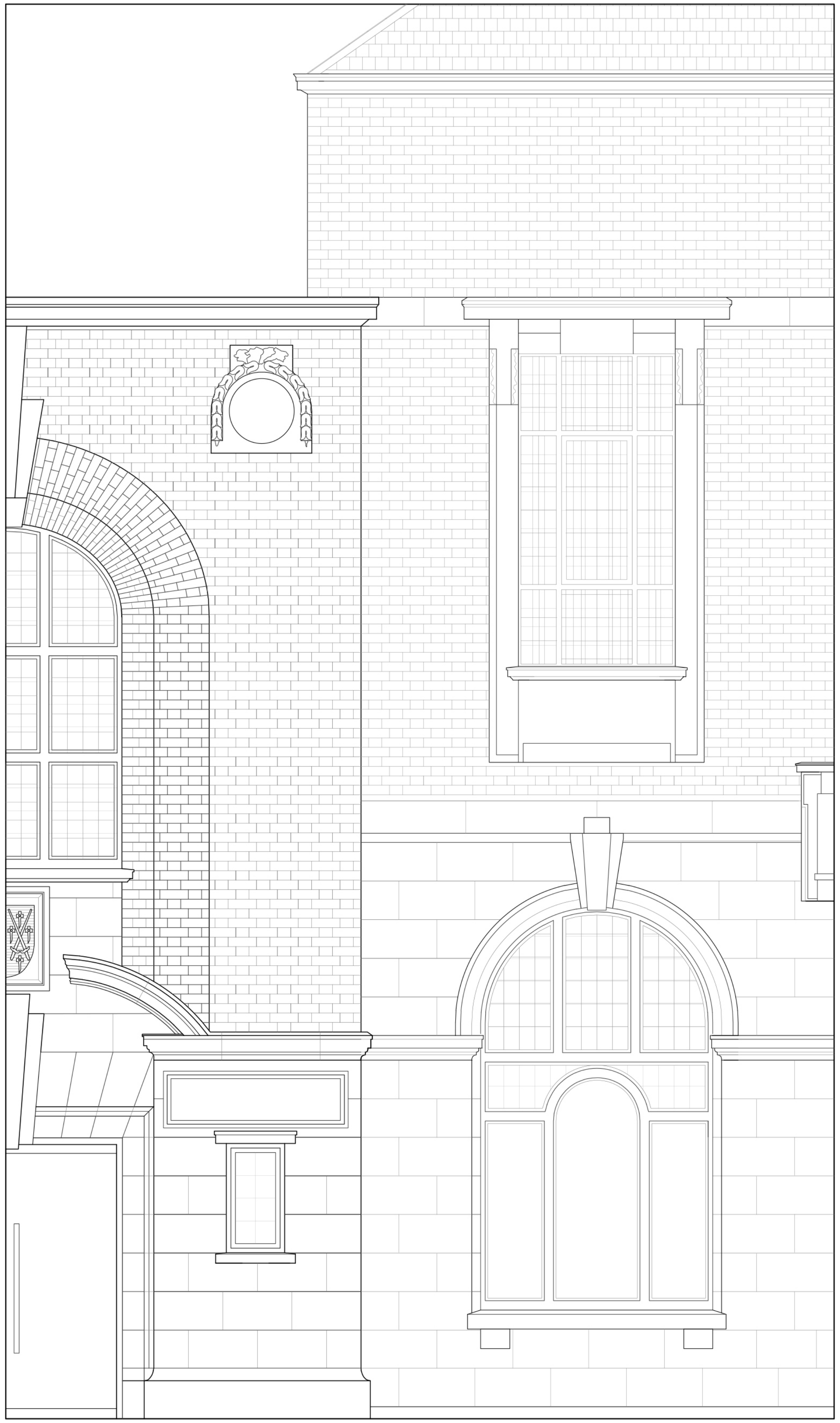


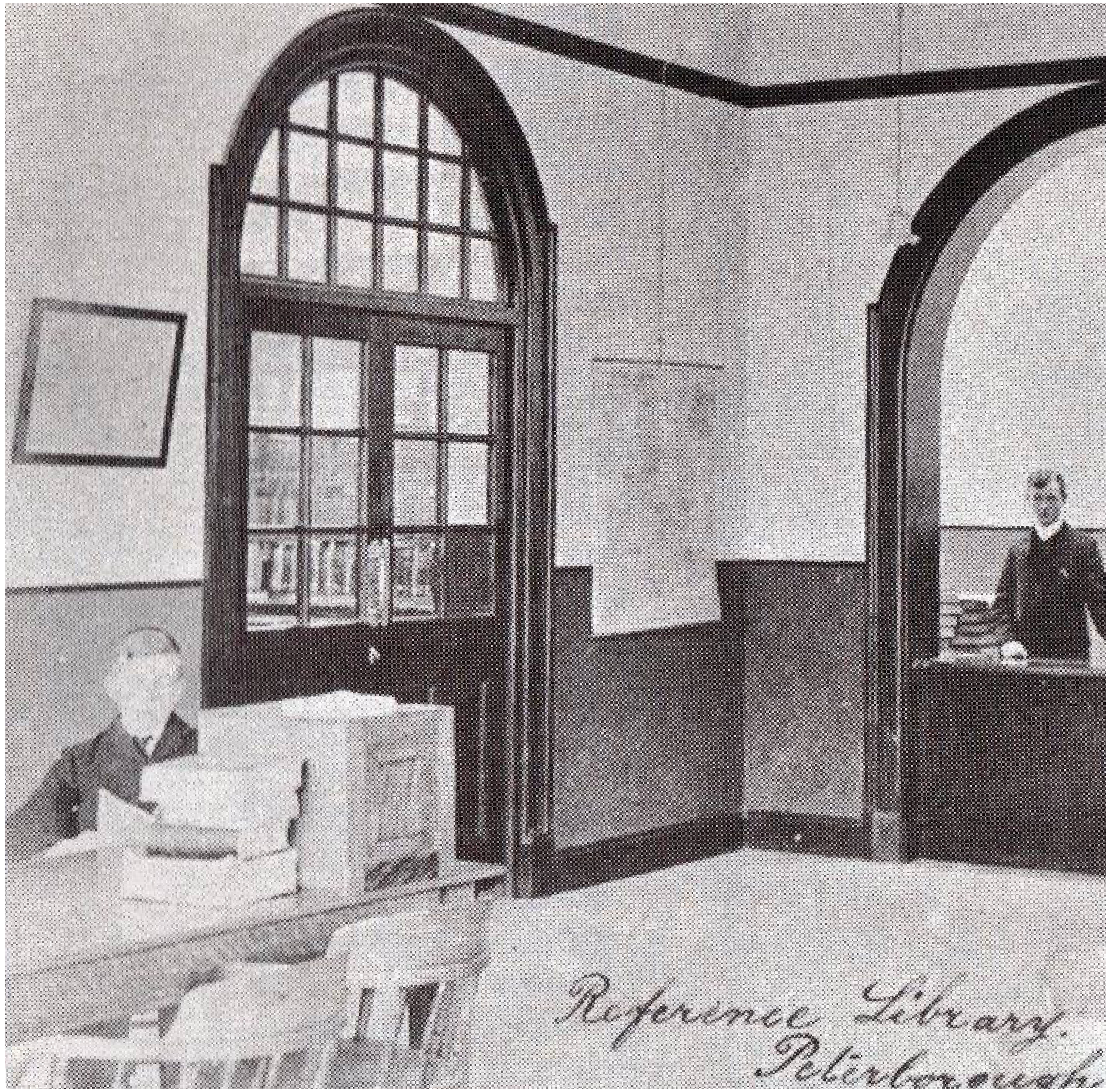


Carnegie Libraries in the UK

1903

Andrew Carnegie endows a library



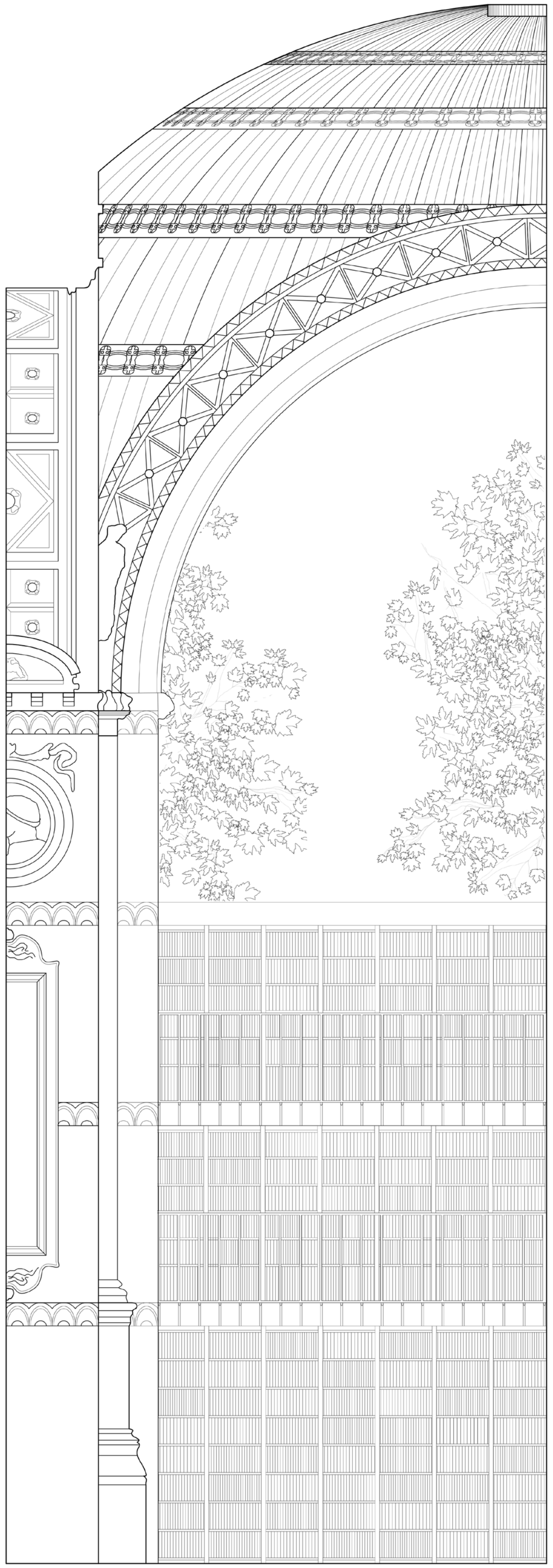


1:50 Elevation of Peterborough
Carnegie Library

1903

Revolutionary construction methods and ‘scientific design’ lead to a truly contemporary building

Prizeman, 2010
Campbell, 2013



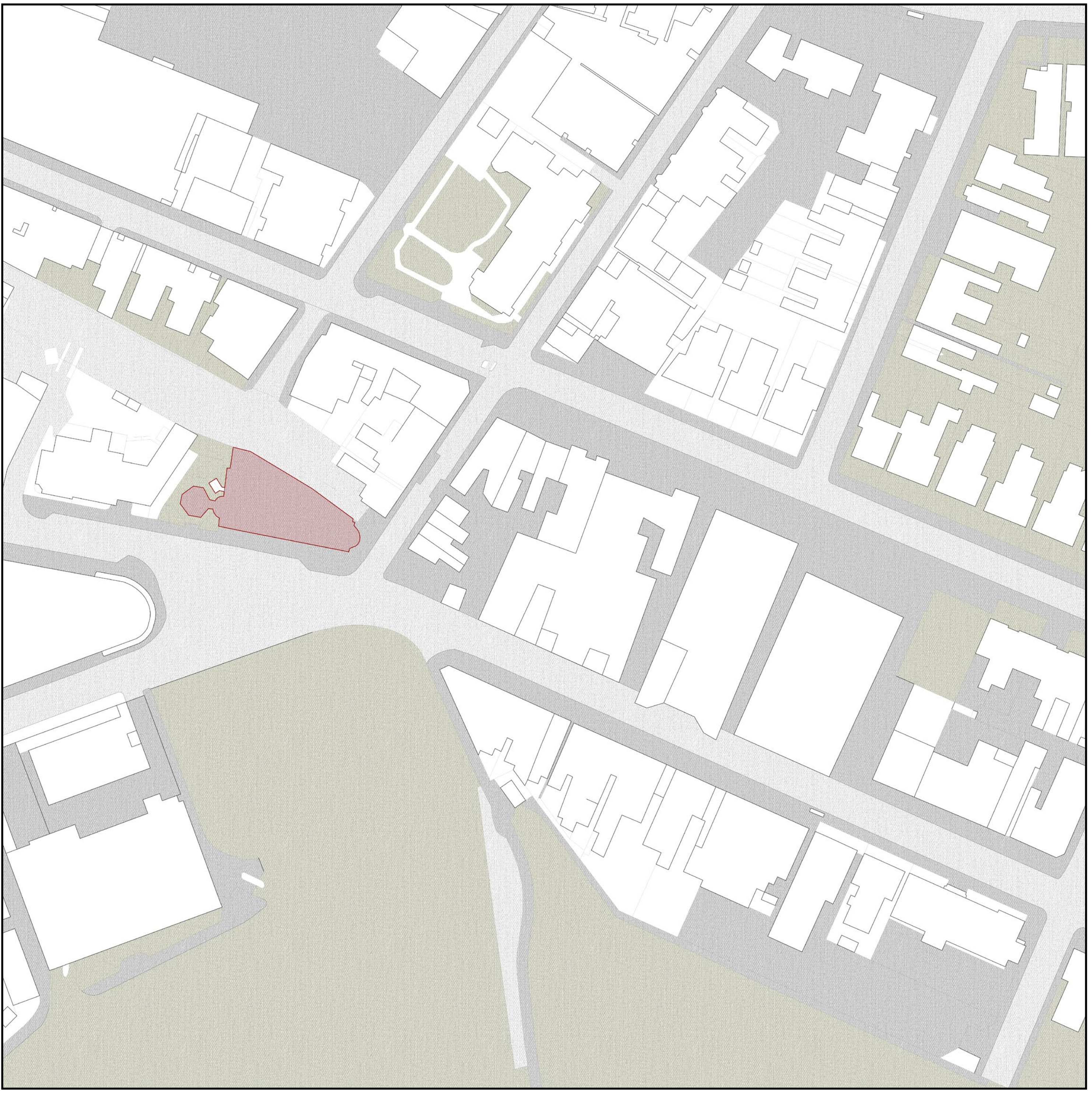
Section through Henri Labrouste's
1852 National Biblioteque

Model through National Biblioteque

1903

The Carnegie building programme took heed from early public libraries, creating secular cathedral-like spaces

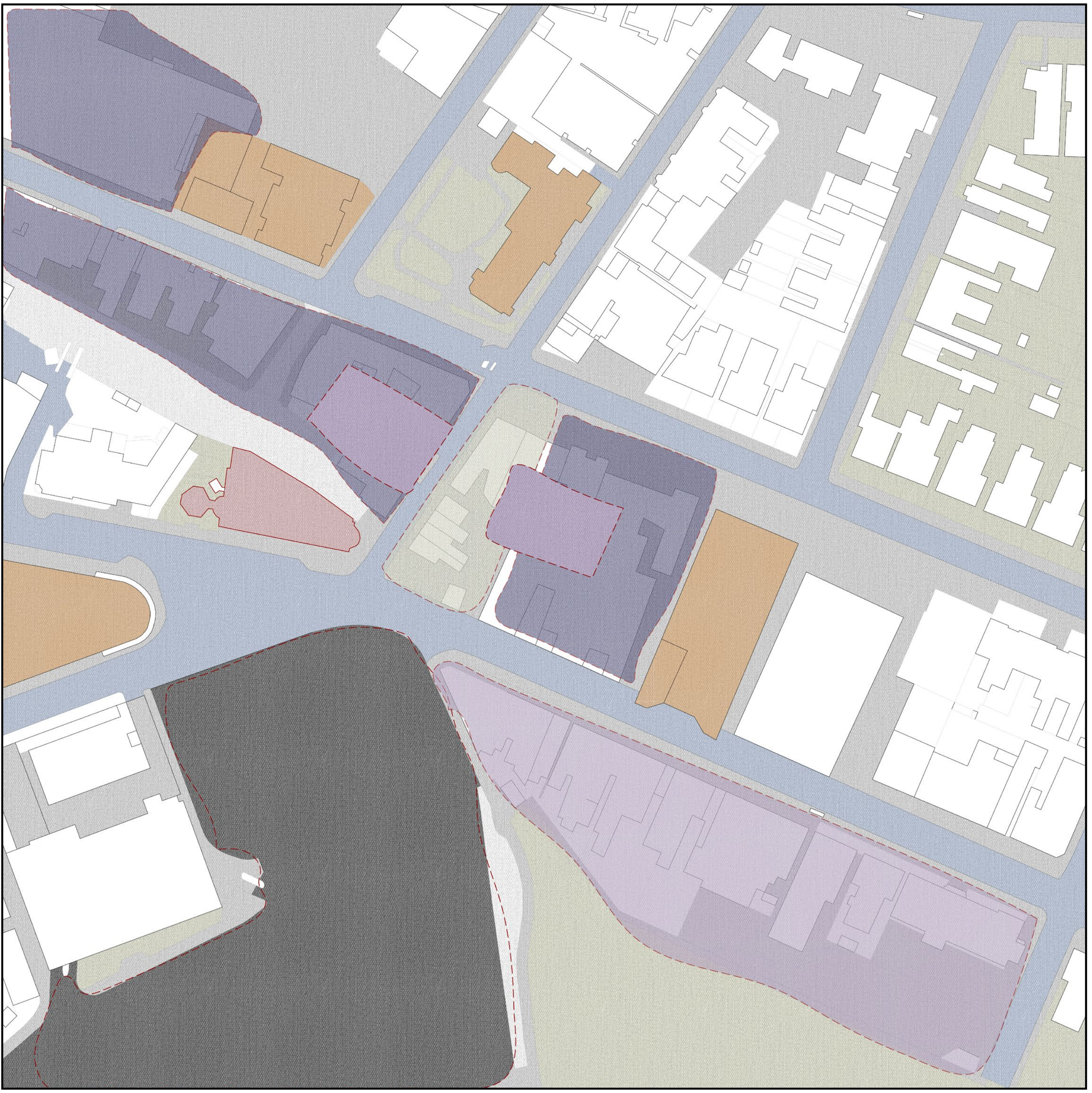
Pryor, 2016
Bendixon, 1988



1965

Peterborough is designated as a “New Town”

Pryor, 2016
Bendixon, 1988

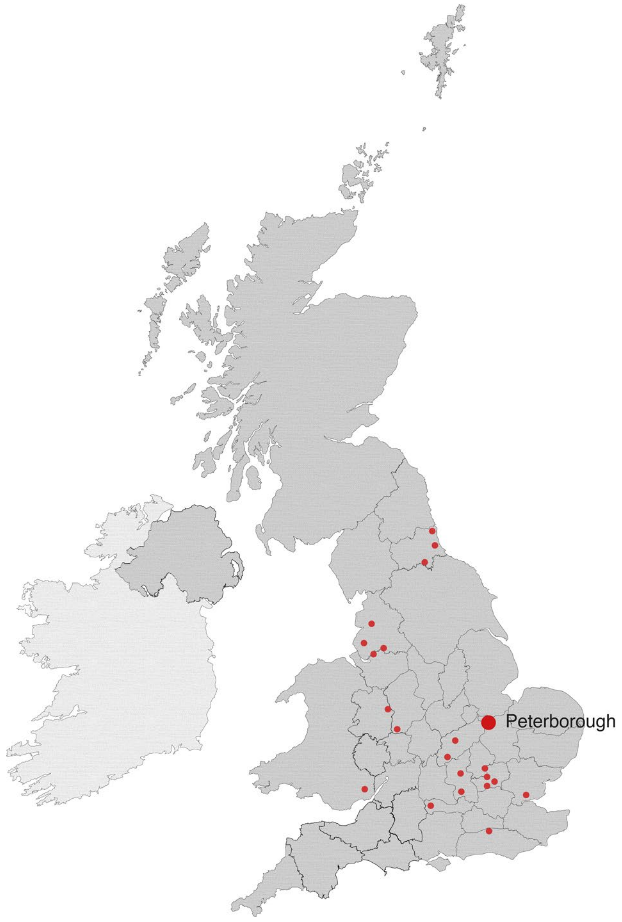


- ◆ Pedestrianised streets
- ◆ Proposed public green
- ◆ New retail space
- ◆ New office space
- ◆ New large scale car park
- ◆ Peterborough Development Corporation buildings

1974 Intended Zoning

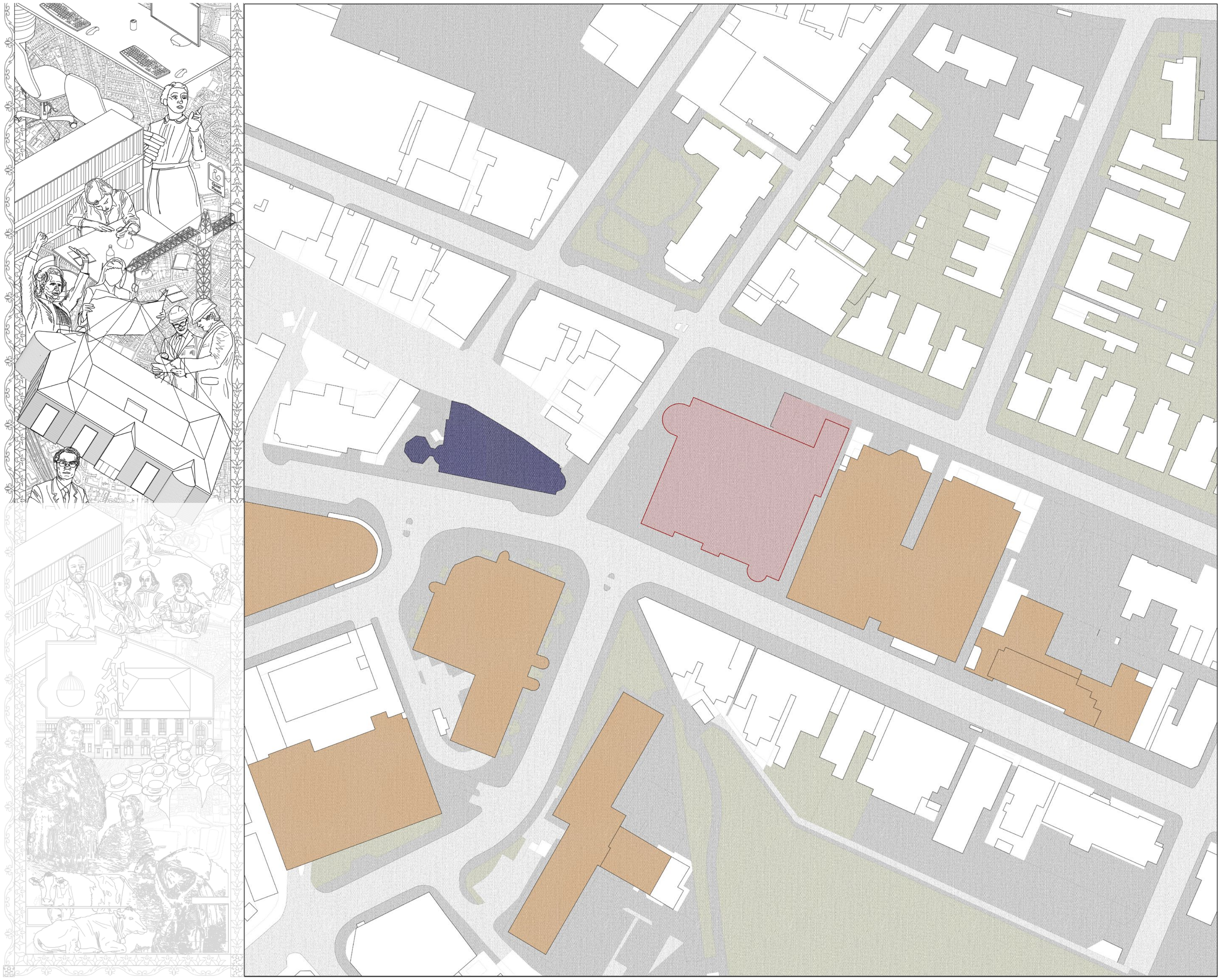
A scheme of utopian reconstruction is laid out

Including pedestrianised streets and new greenspaces around the existing library



New Towns in the UK

Peterborough Historic Society, 2020
Secretary of State 1972



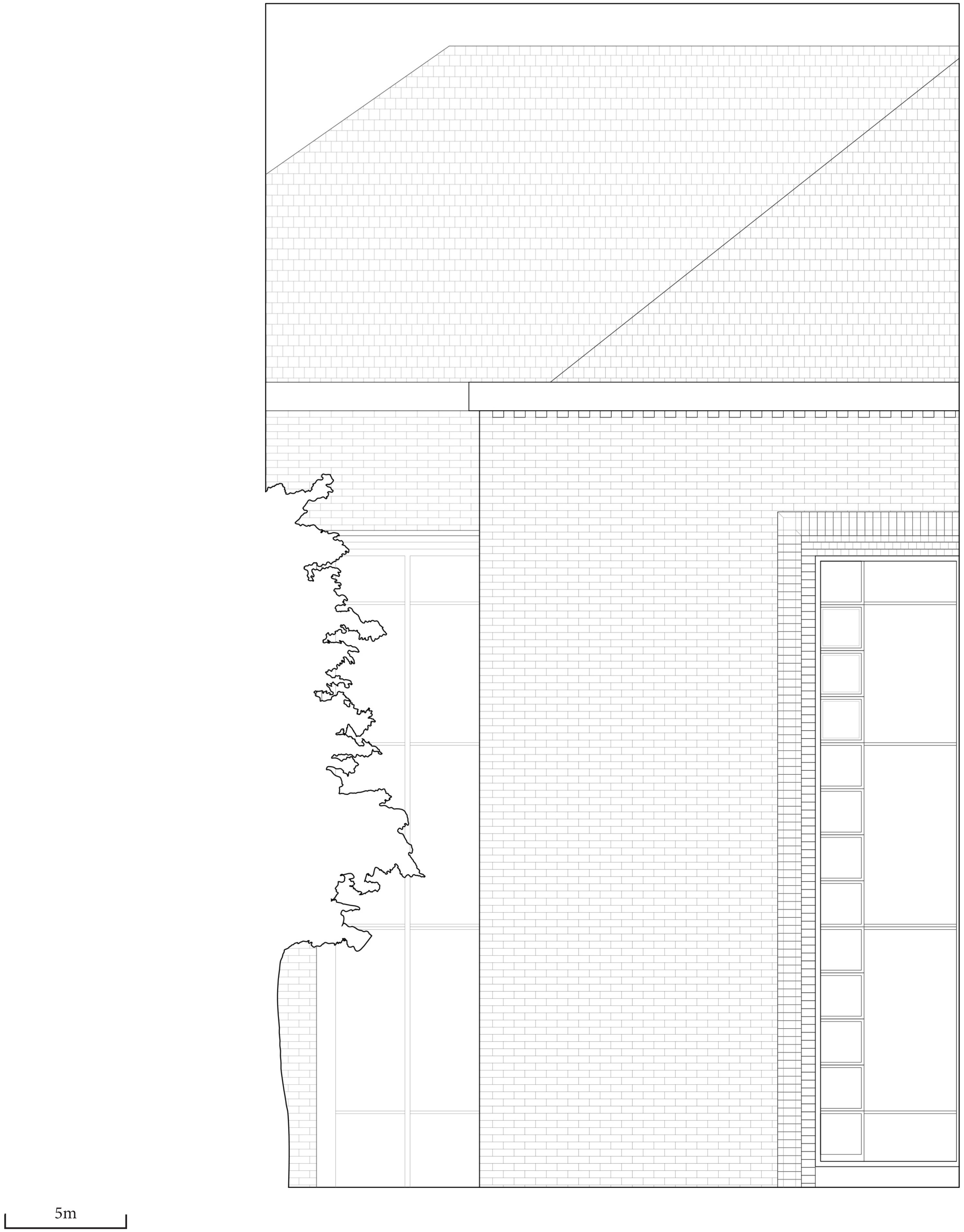
1990

Under subsequent governments the development dries up
Remaining New Town funds are spent on a large, uninspired library

New library (an afterthought) ◆

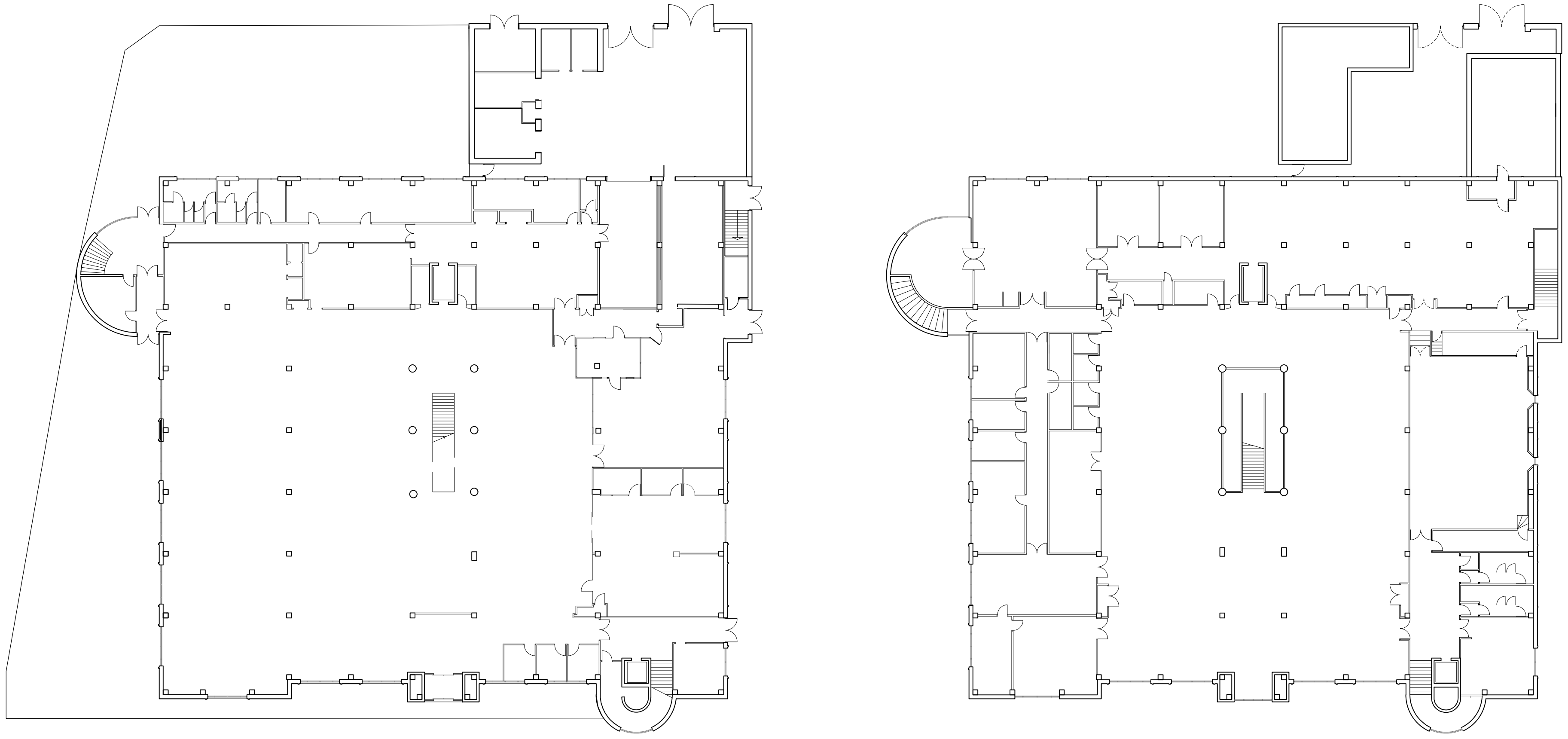
Peterborough Development
Corporation buildings ◆

Resulting urban layout



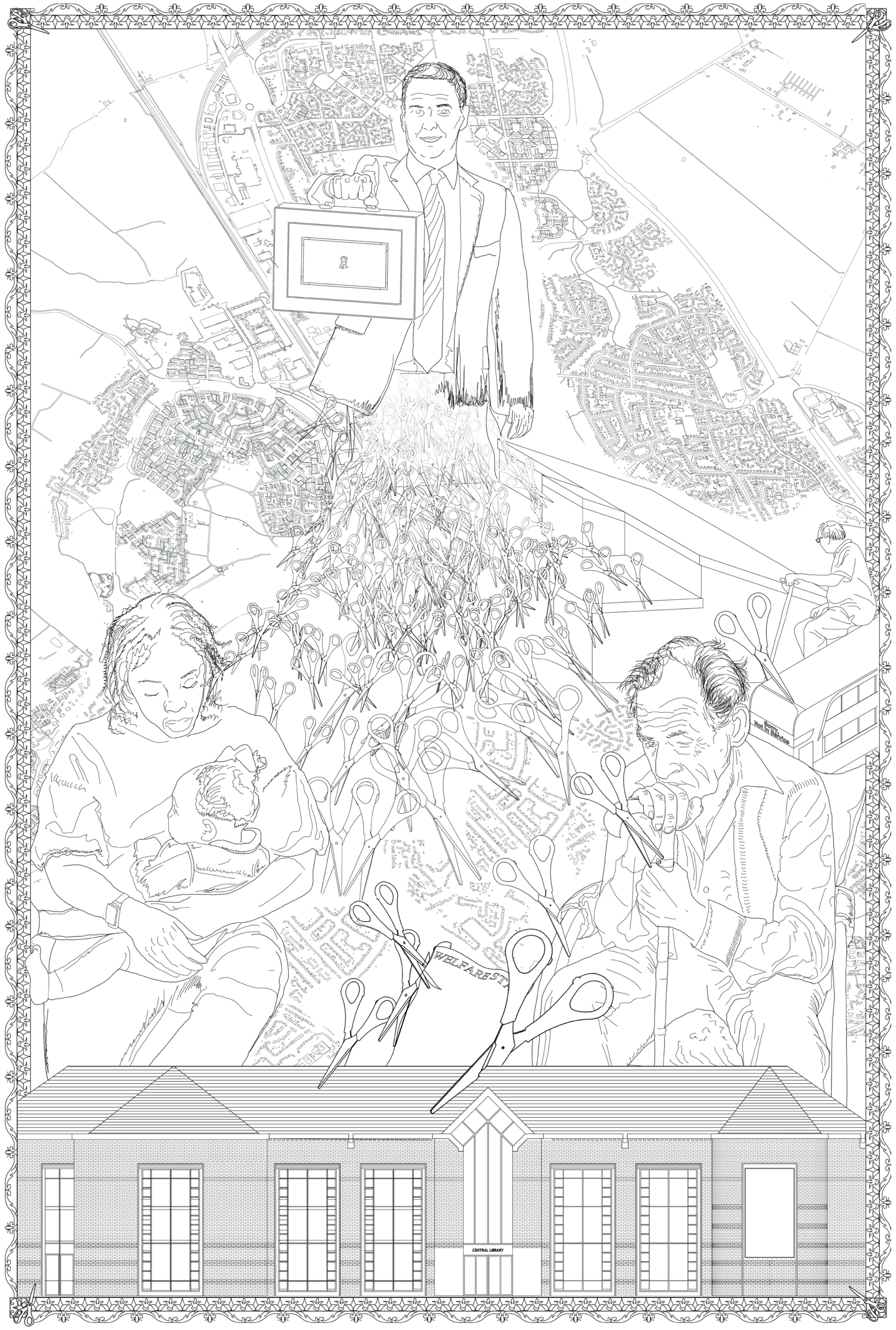
1:50 Elevation of
Peterborough
Central Library

A library that no one asked for, built as cheaply as possible



The library was envisioned as an open plan, scholarly space

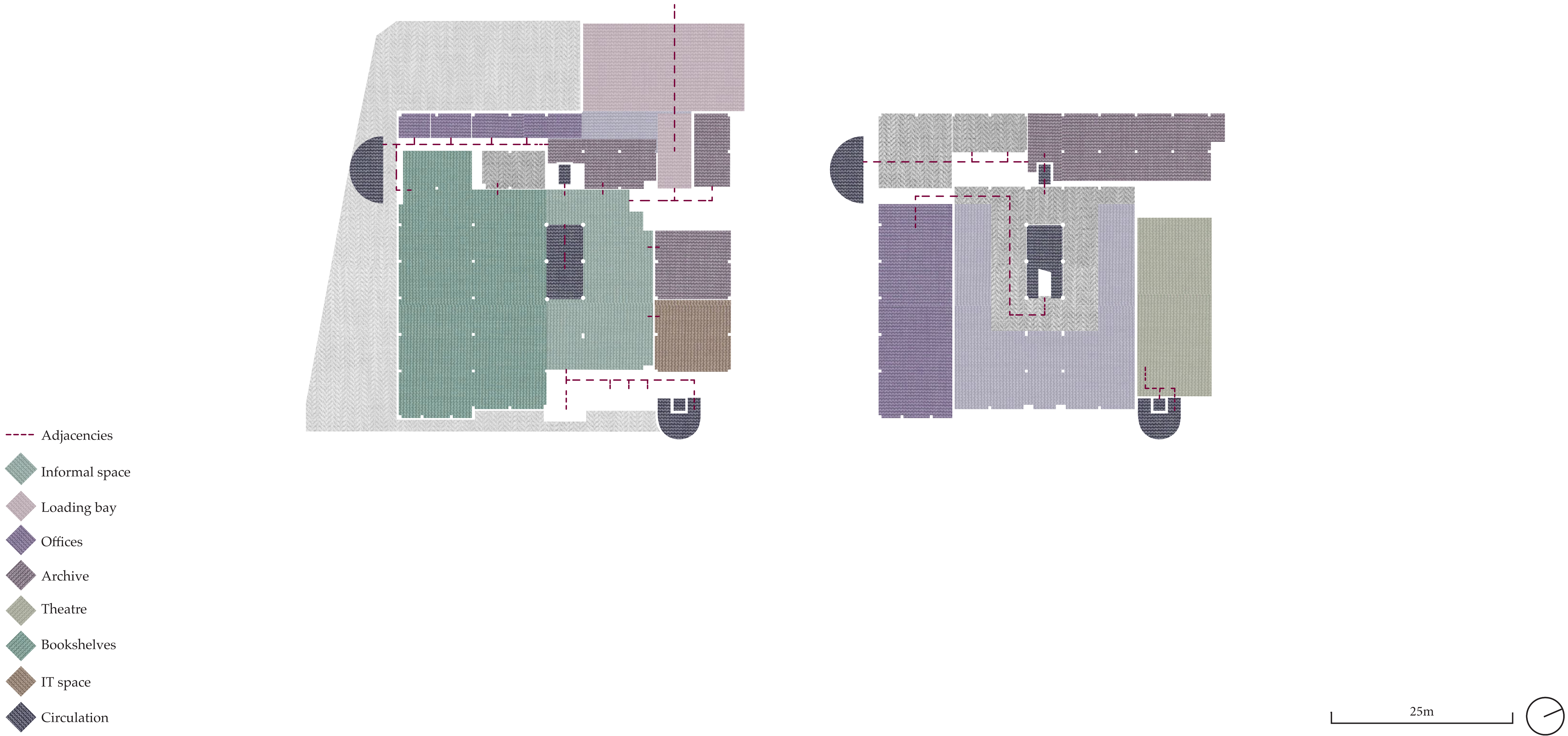
Plans of existing Peterborough Central Library



Cuts to state service have meant social pressure is put on the libraries

Non est potestas Super Terram quæ Comparetur ei. Iob. 41 24
LEVIATHAN
Or
THE MATTER, FORME and POWER of A COMMON WEALTH ECCLESIASTICALL and CIVIL.
By THOMAS HOBBES of MALMESBURY.
London
Printed for Andrew Crooke
1651

Miniature 2: The Anti-Leviathan
Source: Frontispiece for Hobbes’ Levithan
Edward Bosse 1651

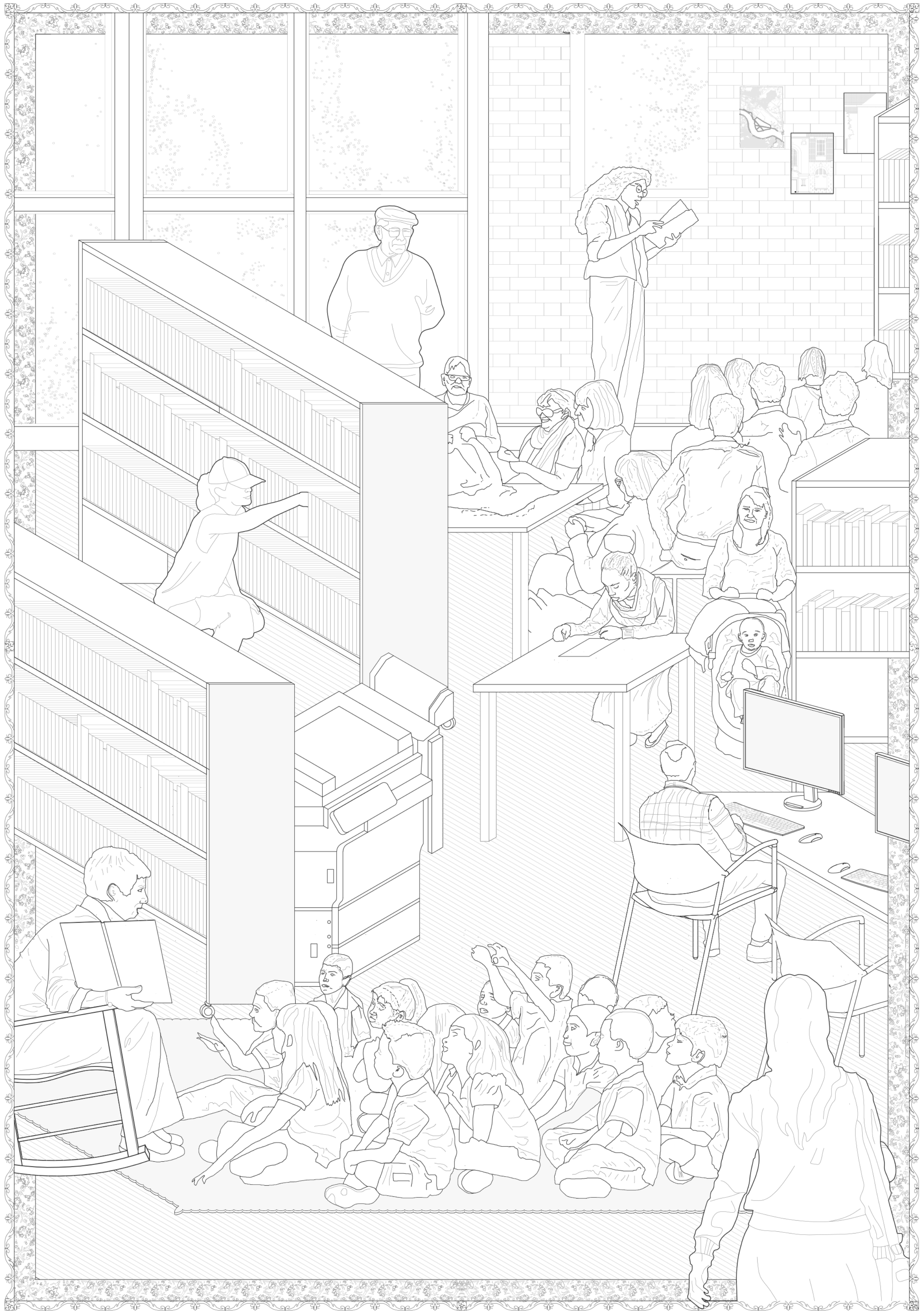


The library has become a patchwork of state services

Plans of existing Peterborough Central Library

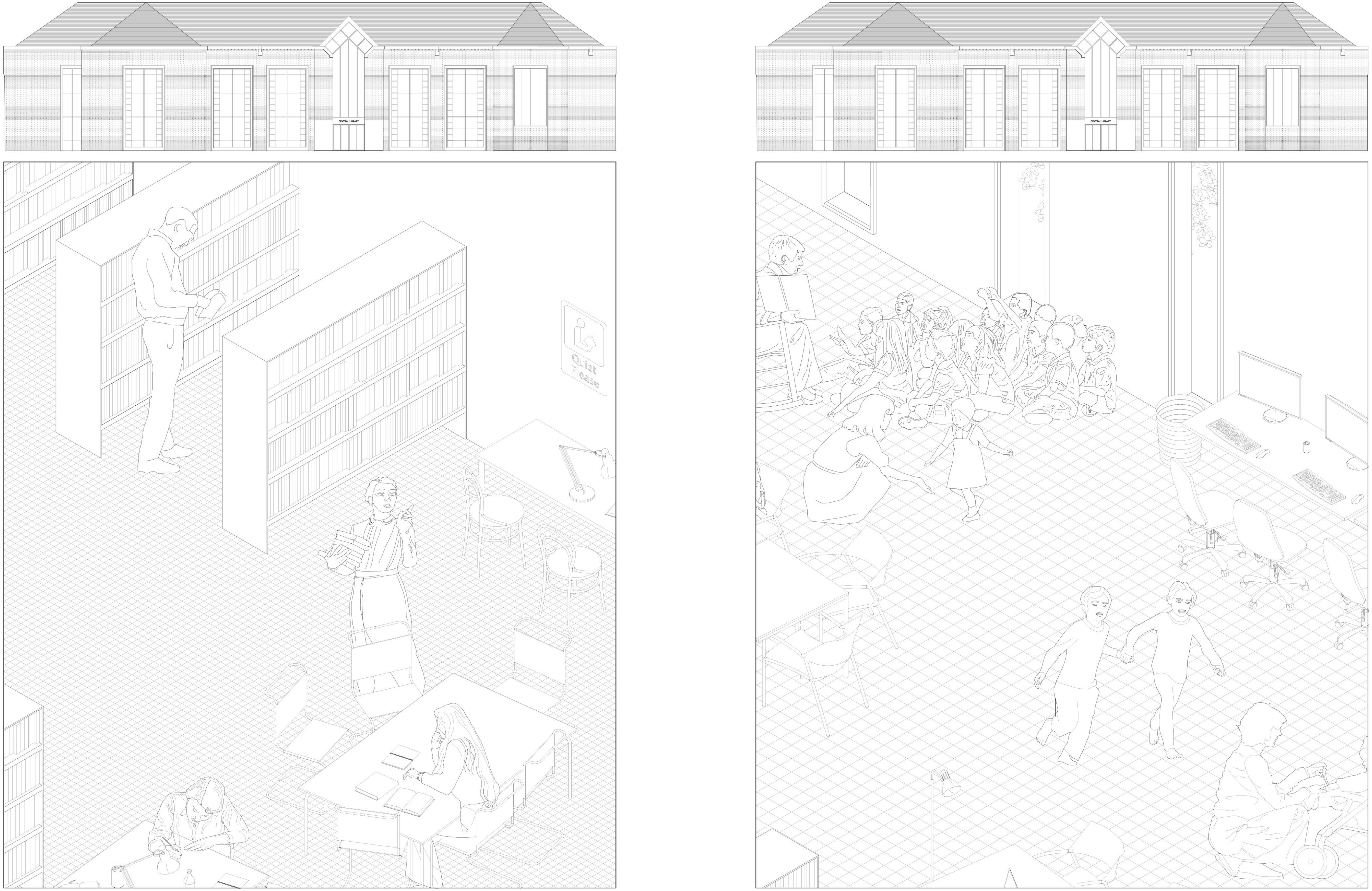
Libraries were once treated as places of solitary study

St Jerome in his study, Durer, 1514



Now, the library has become nexus in the social fabric of the city

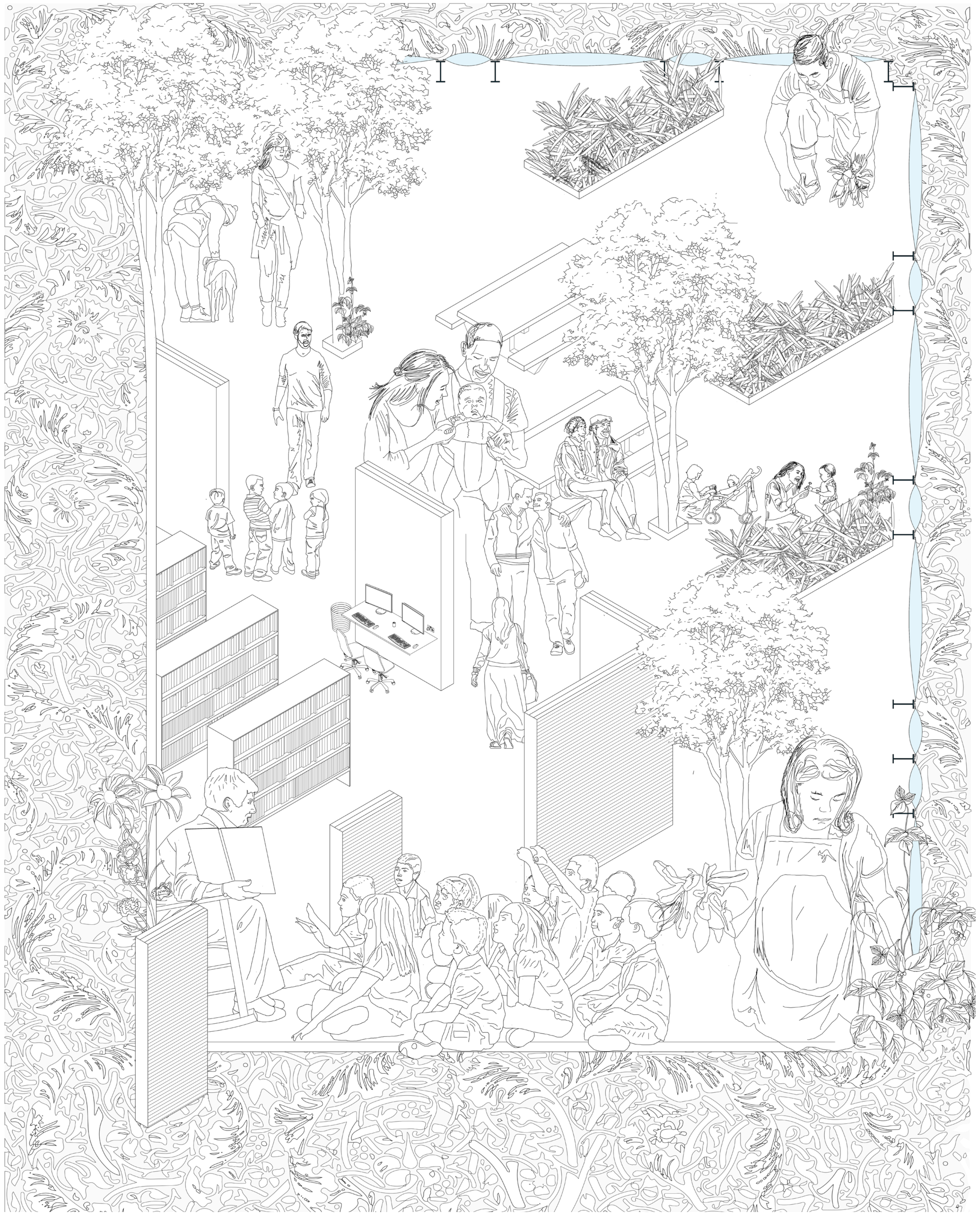
Miniature 3: Social Solace
St Jerome in His Study,
Albrecht Durer 1514



1990: Institutional

The role of the library has changed, but the form has not

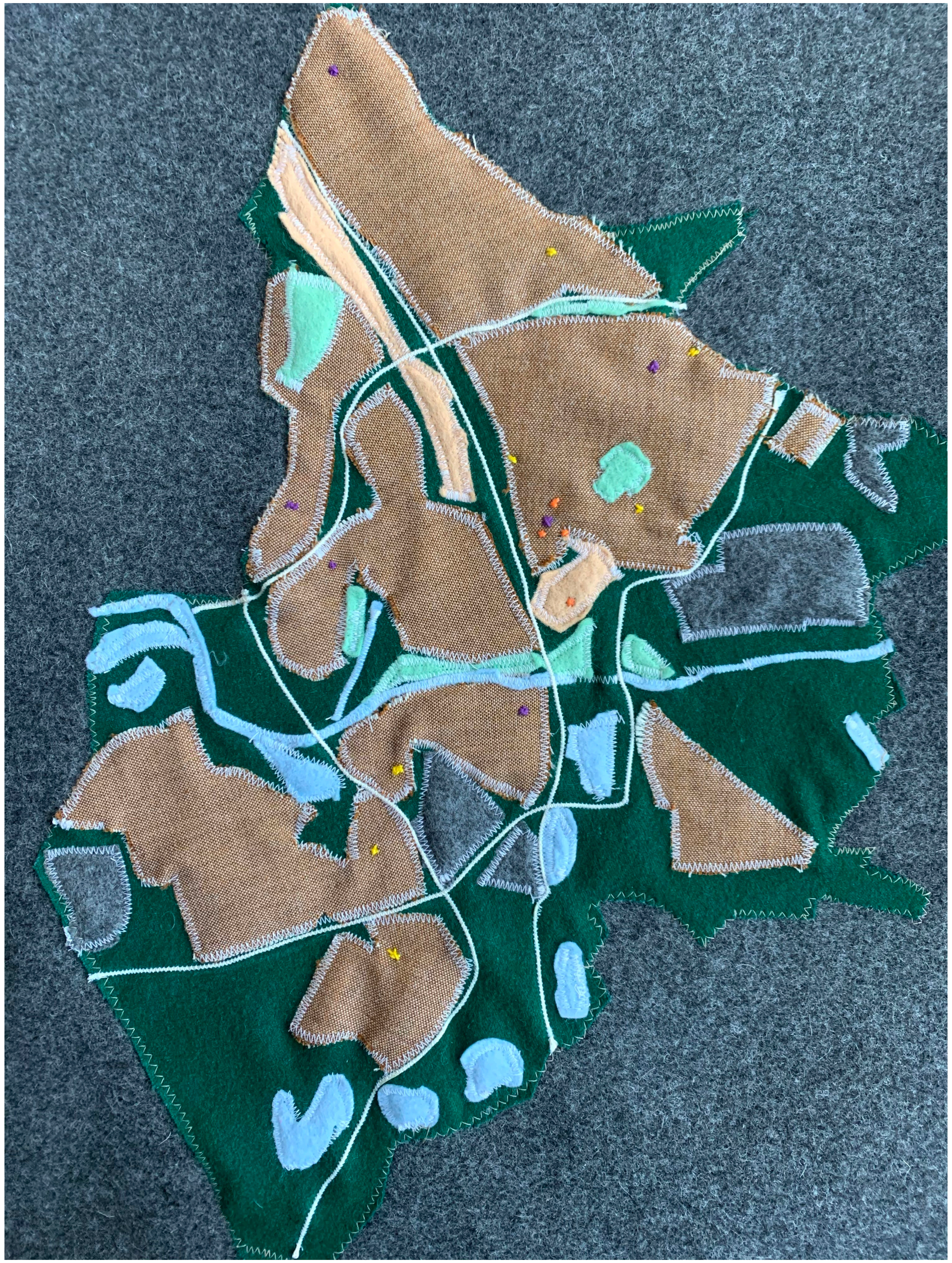
2020: Informal



Michaelmas proposal plan

First term proposal: A new facade and green space

Miniature 4: A Border to the Library
Source: Manuscript Illumination,
Boucicaut-Meister 1400-1430

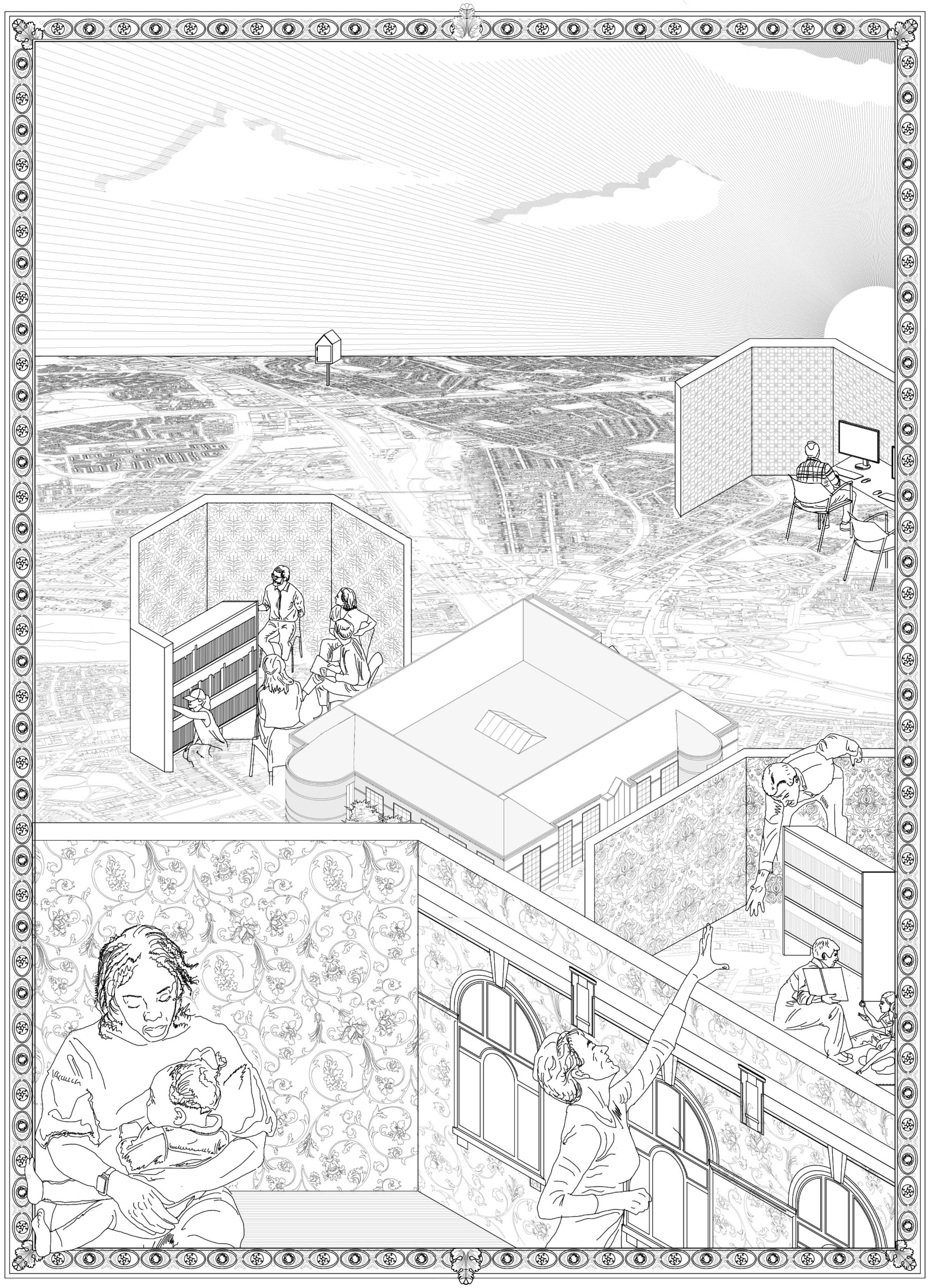


🟠 Cultural offer
🟡 Children’s centres
🟣 Libraries

Locations of Government Services in Peterborough

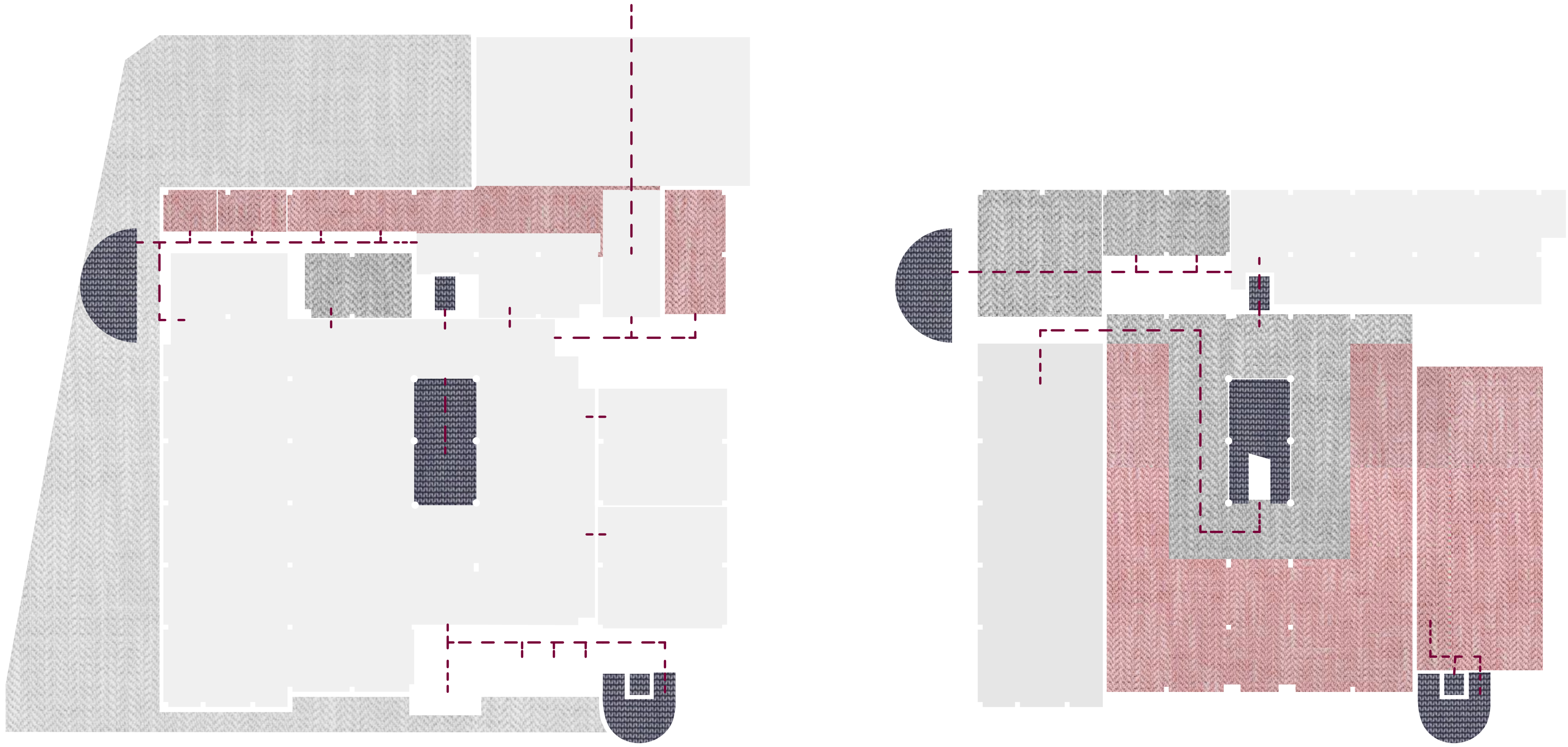
The library now sits within a network of local centres

Patchwork map of Peterborough



These municipal buildings serve to weave the community together

Miniature 5: The Interweaving of the city
Source: History of Jerusalem during the Middle Ages
Descriptio Terrae Sanctae, 1283



- - - - Adjacencies

▨ Informal space

▨ Loading bay

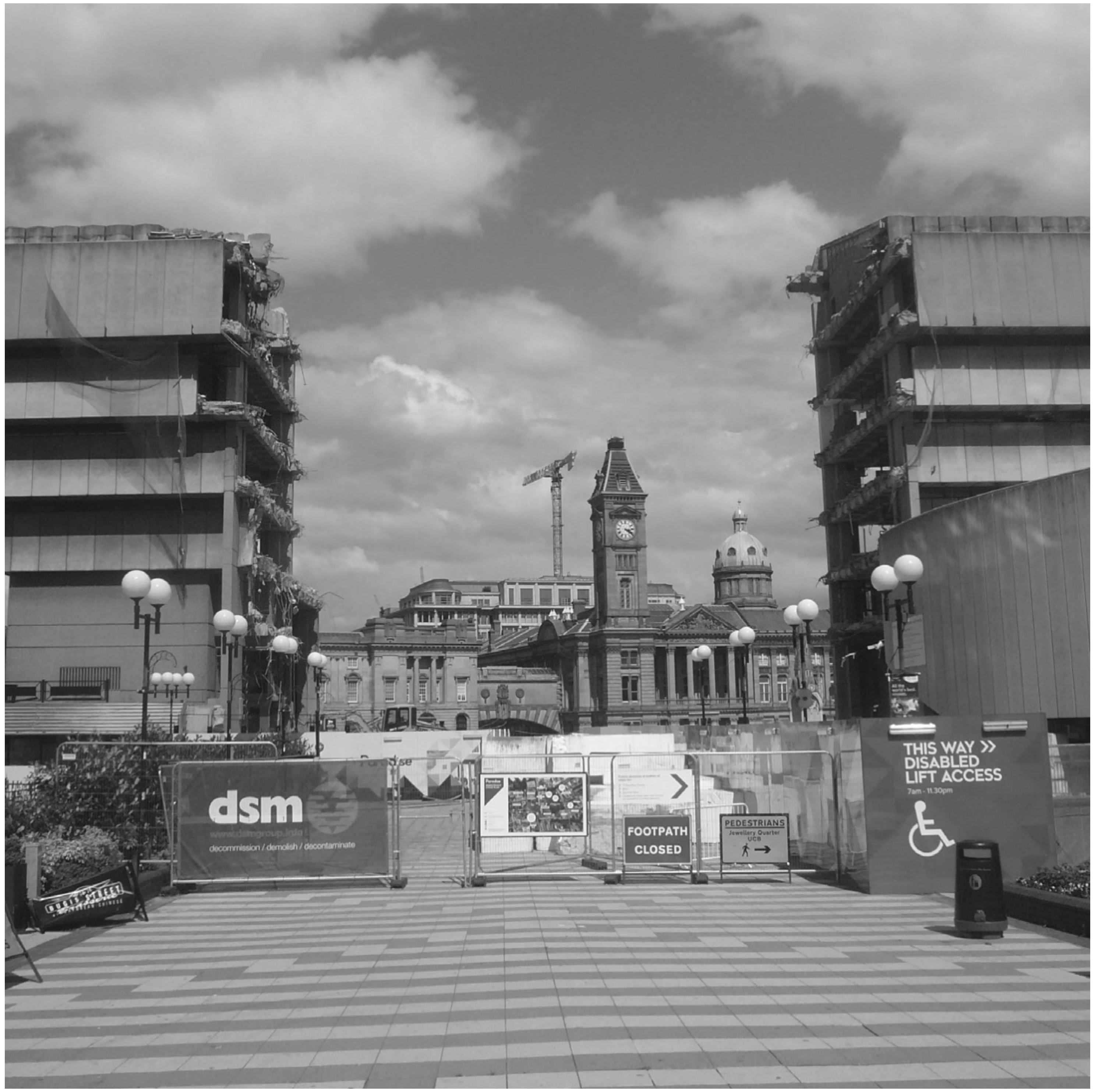
The existing library is larger than necessary

25m

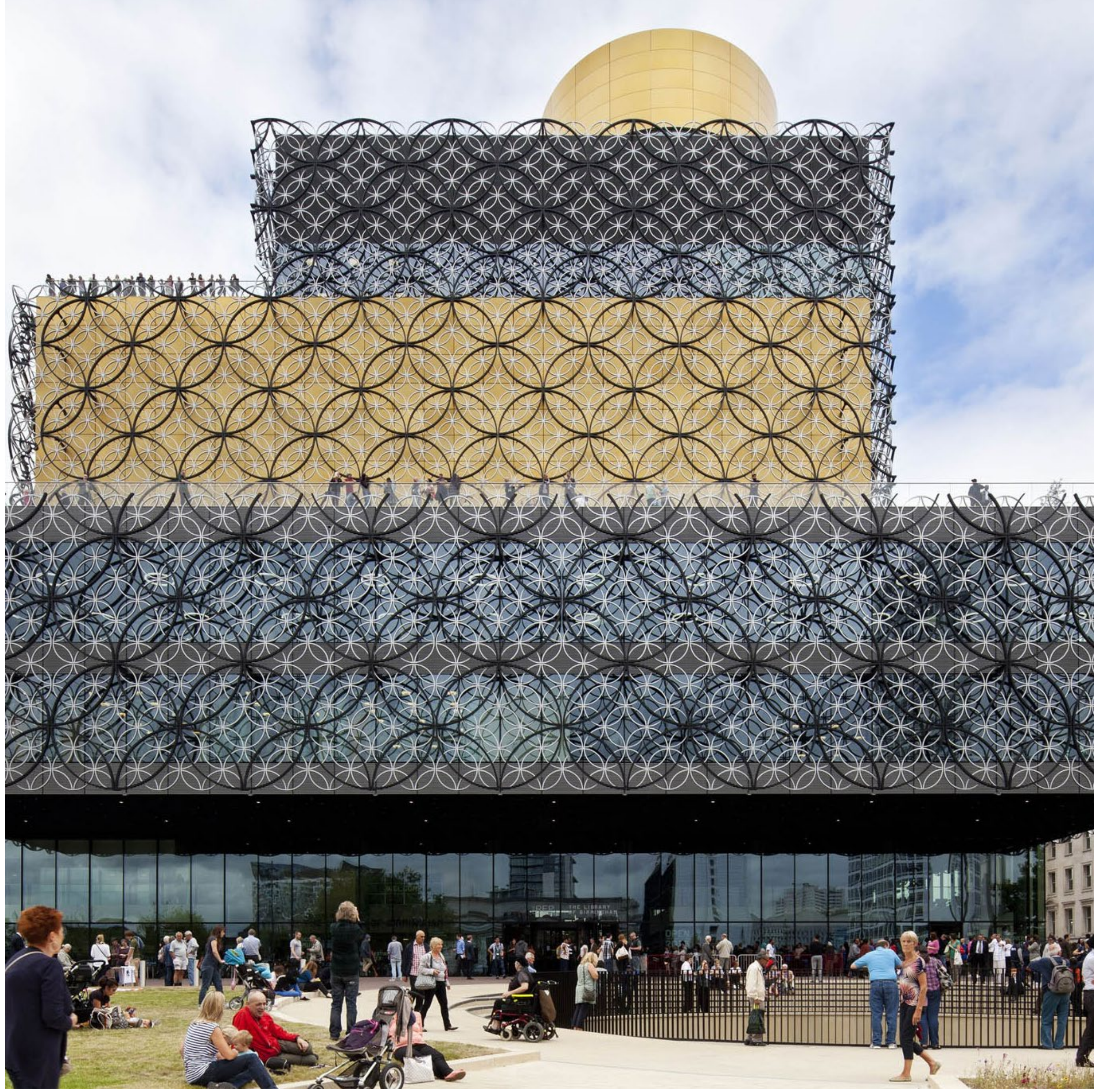
Wasted Space in the Central Library

In a landscape of austerity, library design has continued the tradition of big boxes that become obselete in a few years’ time

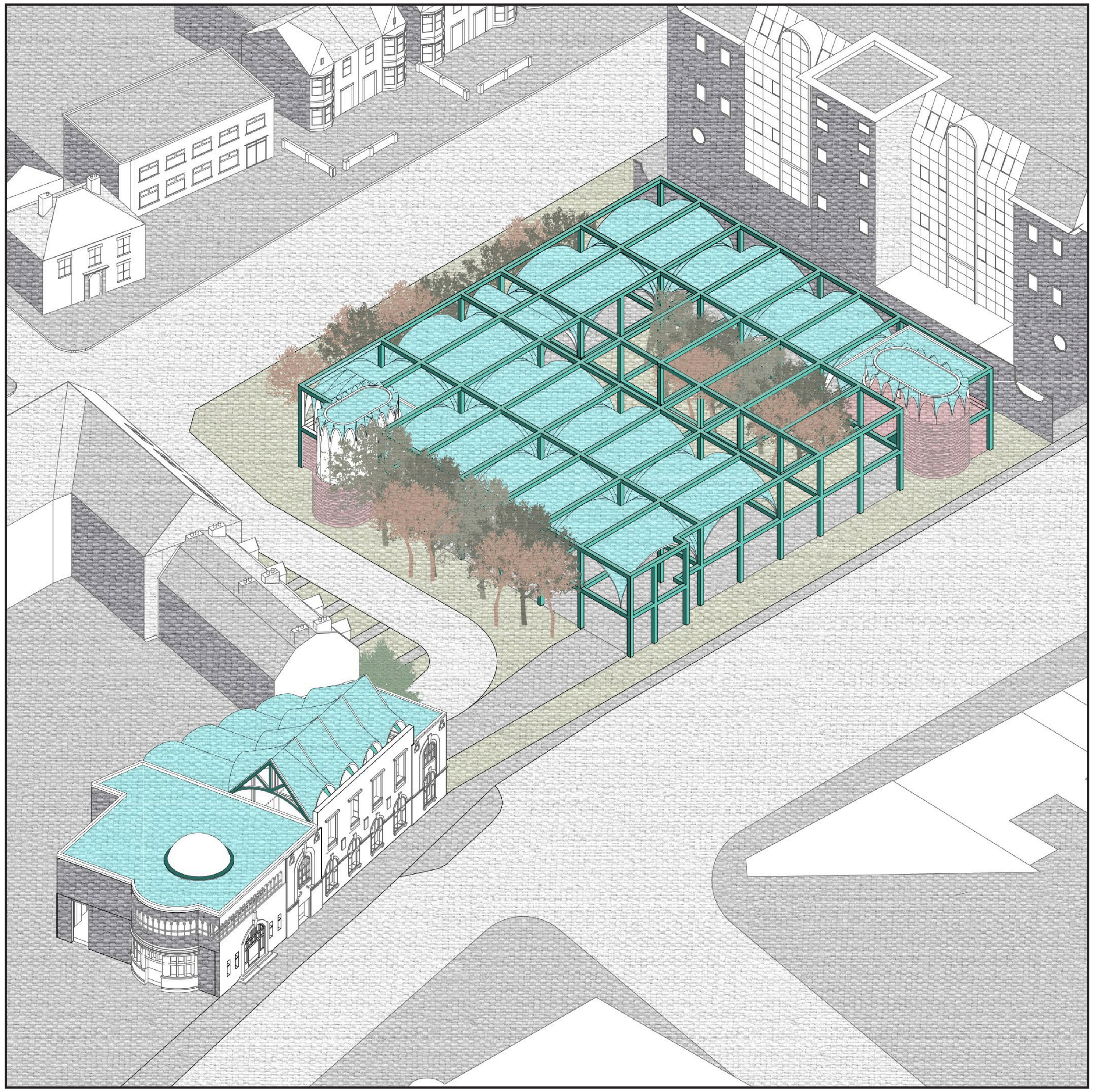
Birmingham: A case study of what not to do



Birmingham's former central library



Birmingham's central library



A bolder proposal for the central library is necessary

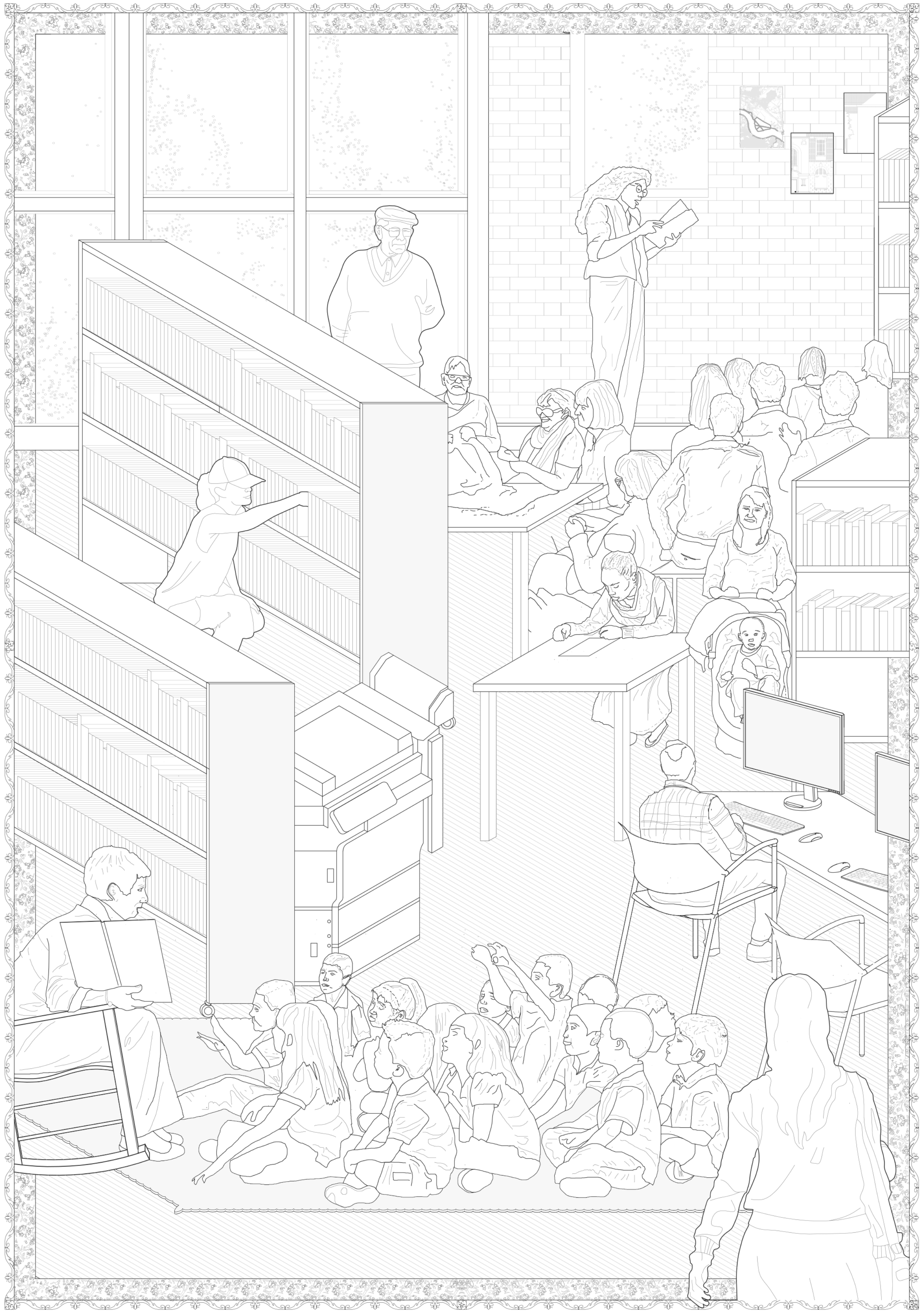
Final Isometric

2

Palimpsest

Rewriting Peterborough

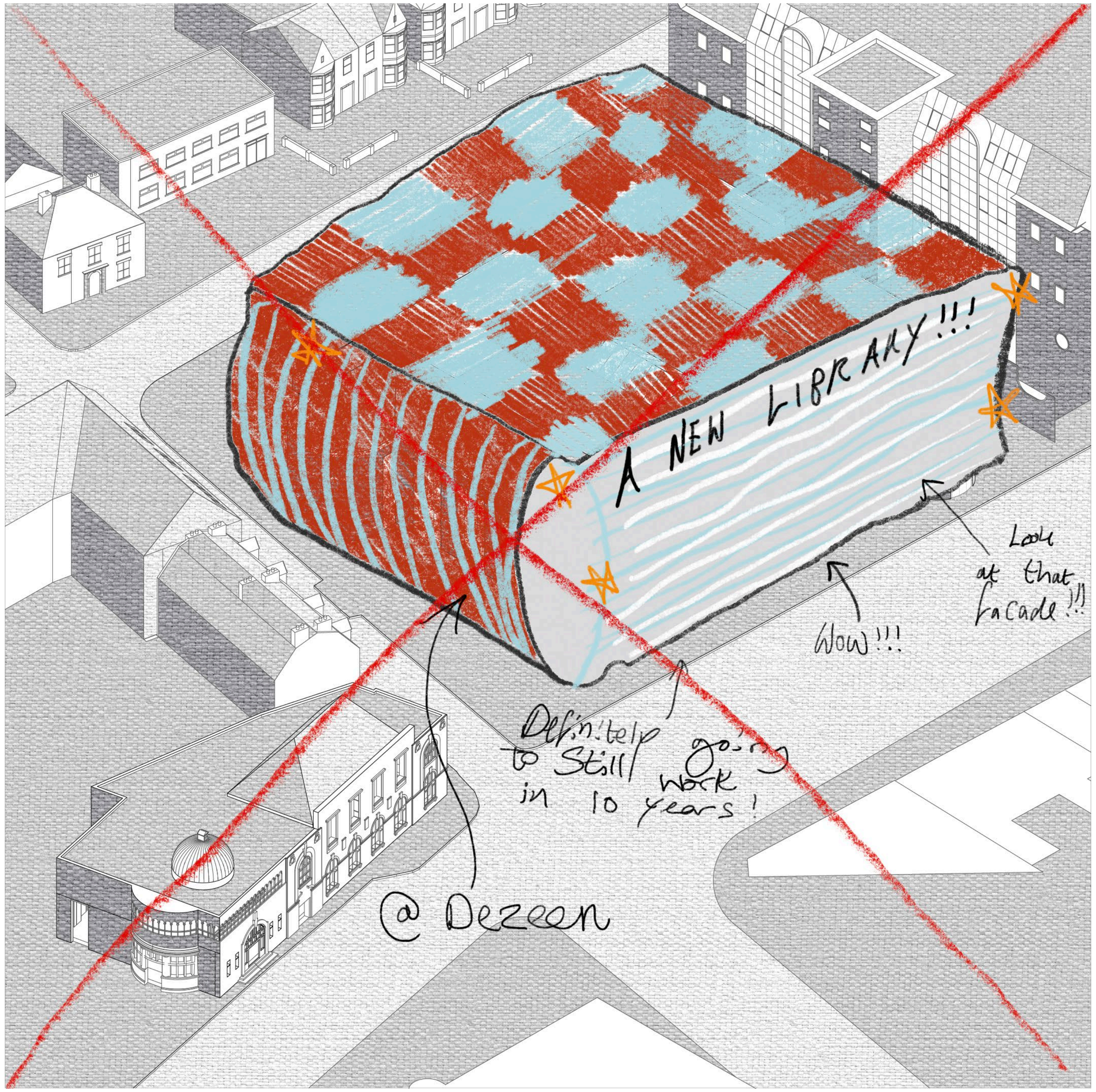
What is a library?



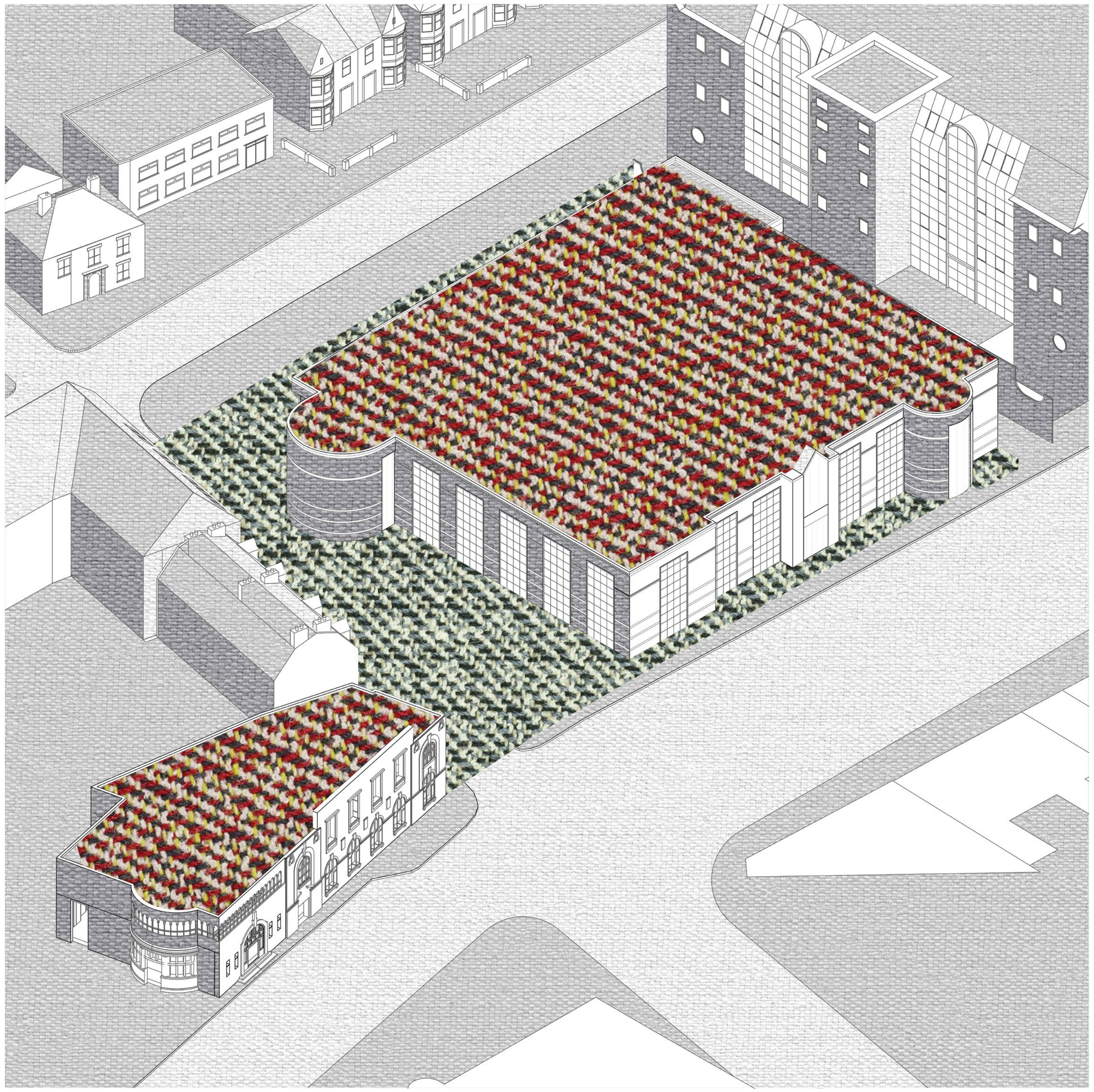
The central library is a confluence of people coming together, interacting and interweaving to make a place

The library is a fabric; it is woven out of the interactions of its users. It is a place made by people

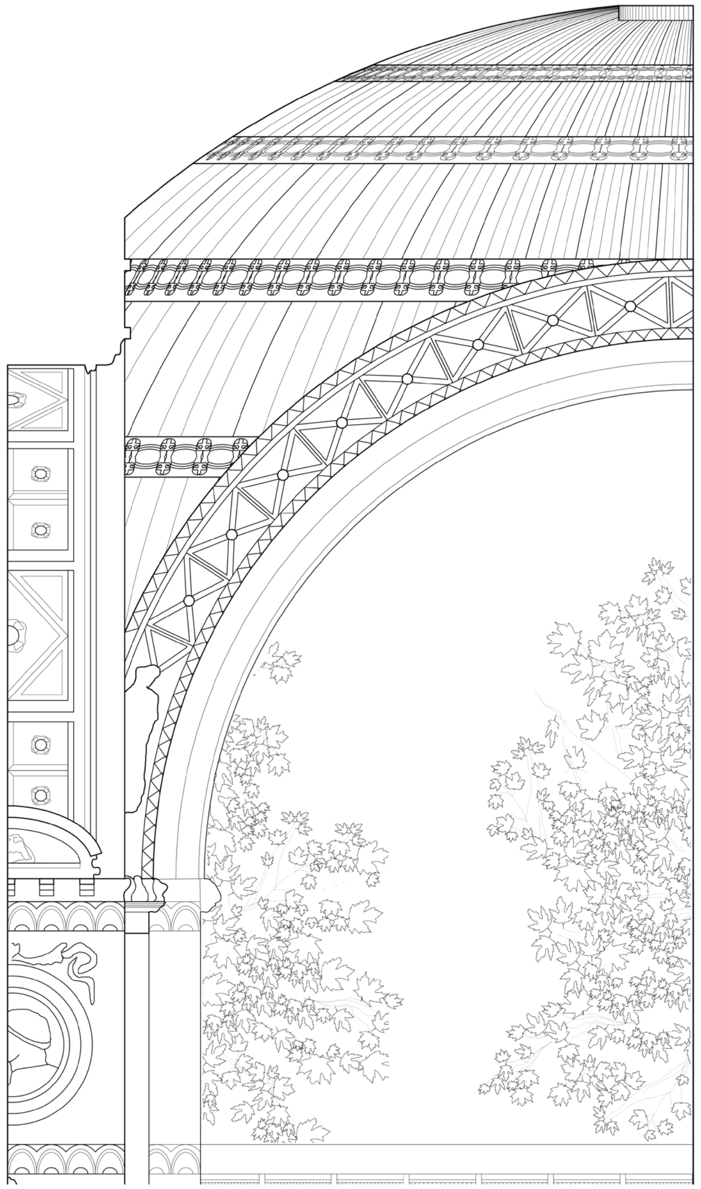
How do I design a centre that weaves people and the city together?


A NEW LIBRARY!!!
Look at that facade!!!
Wow!!!
Definitely going to Still work in 10 years!
@ Dezeen

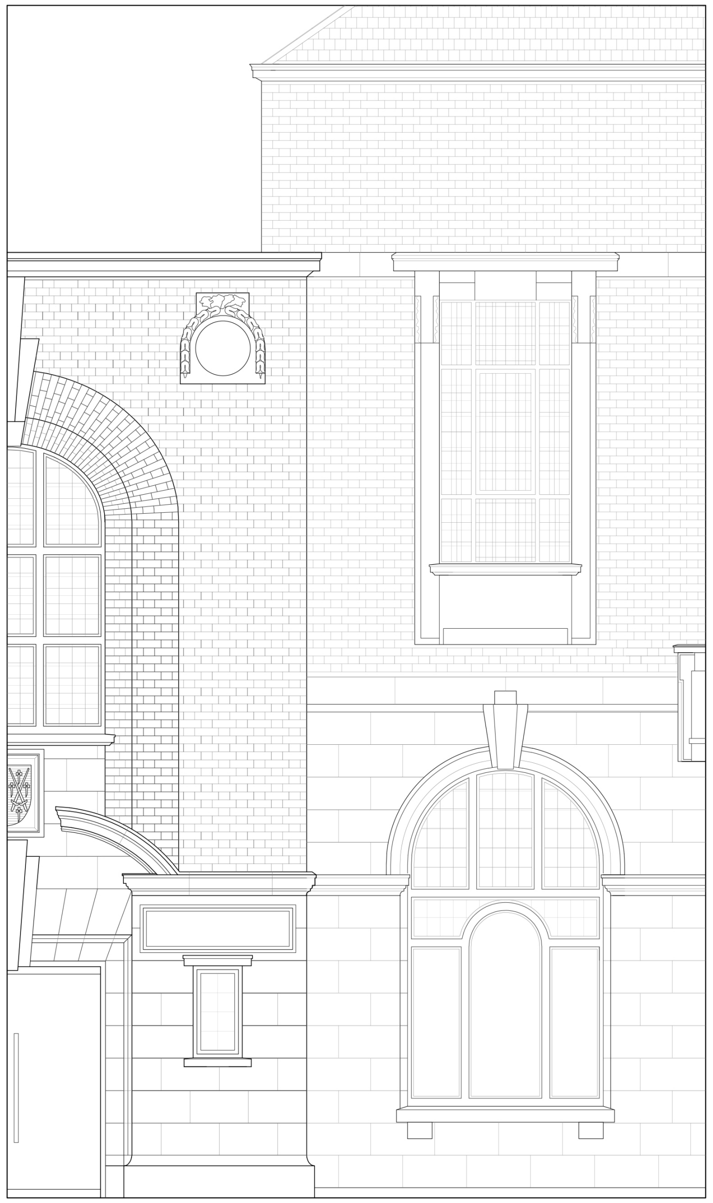
Breaking the cycle of short-life, show-off-y buildings



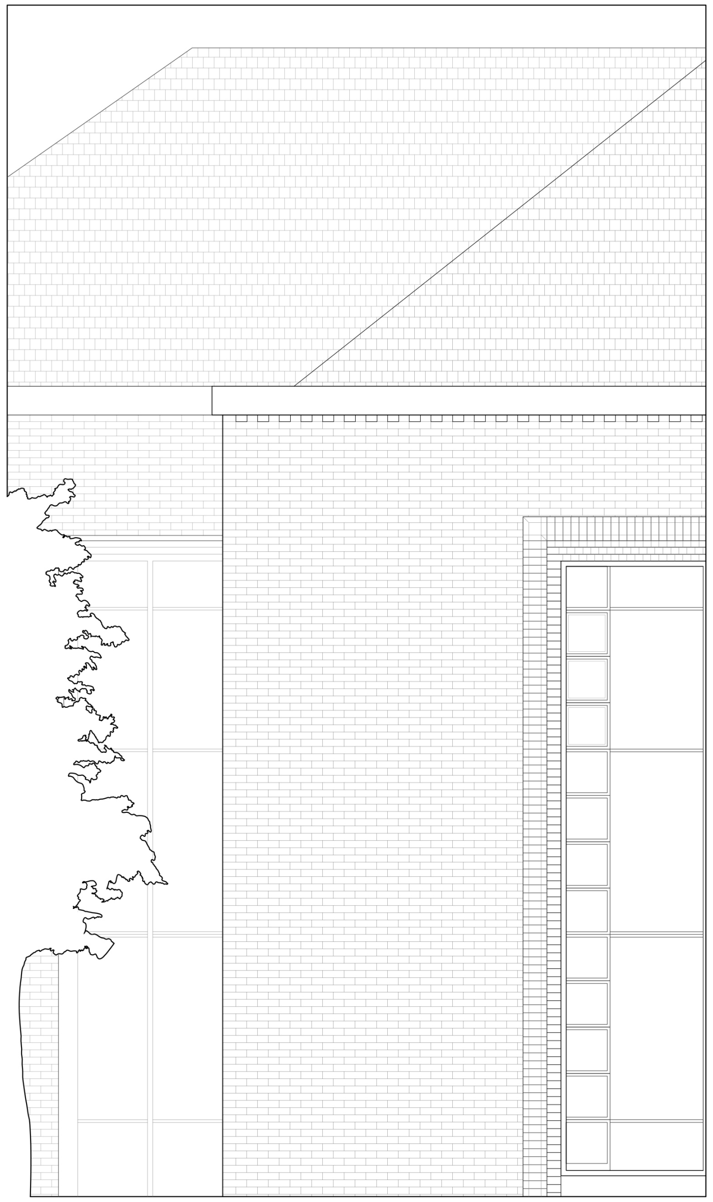
Re-purposing the existing buildings to create a new, inclusive civic space



1850



1900

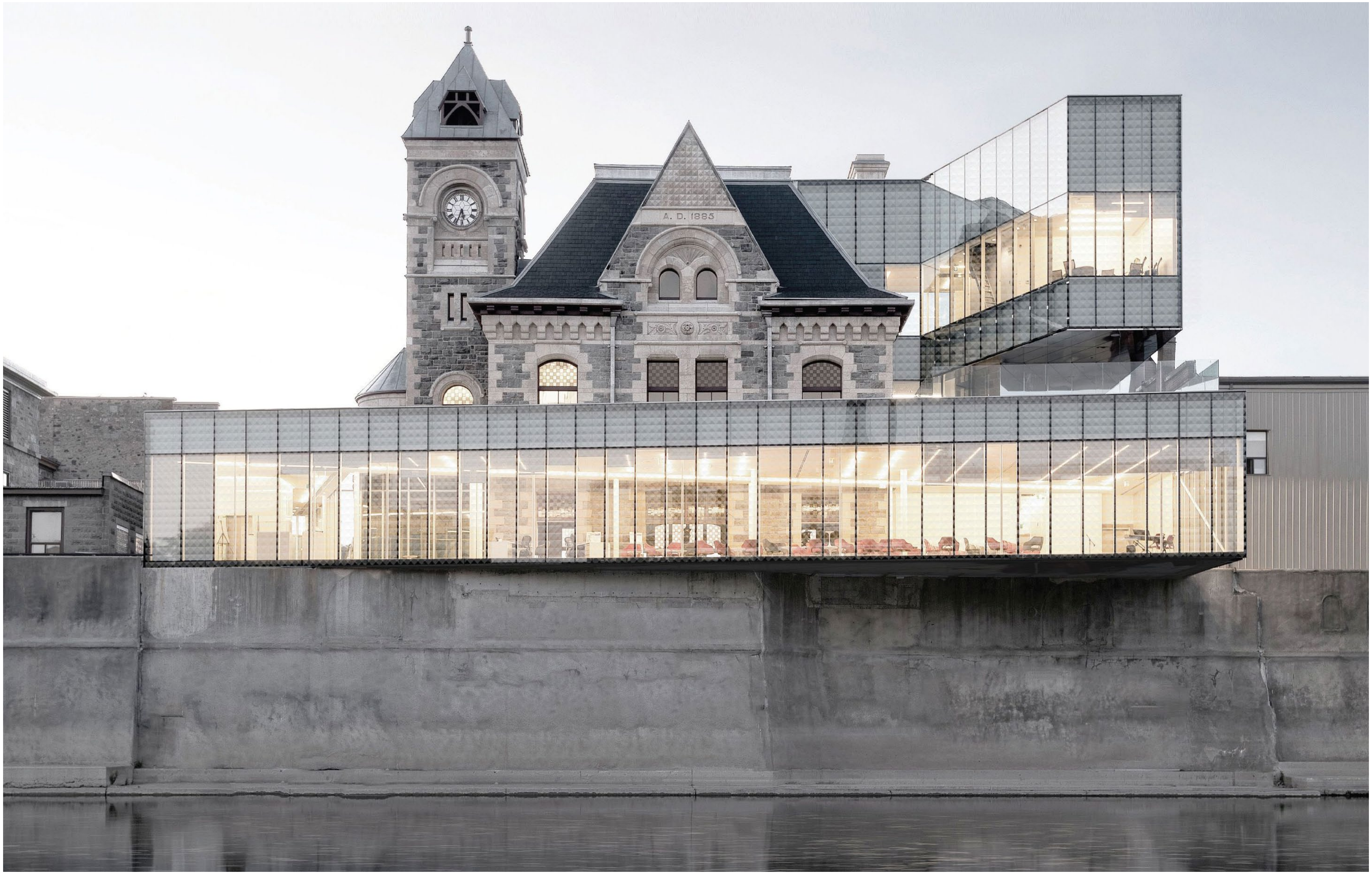


1990

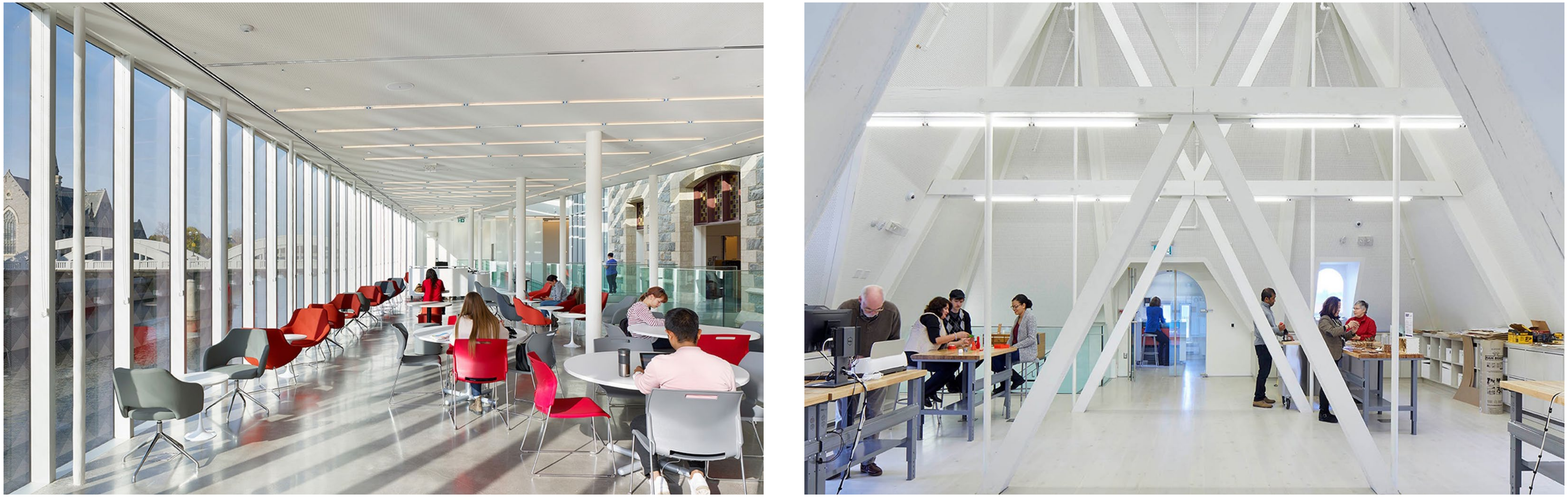
?

2020

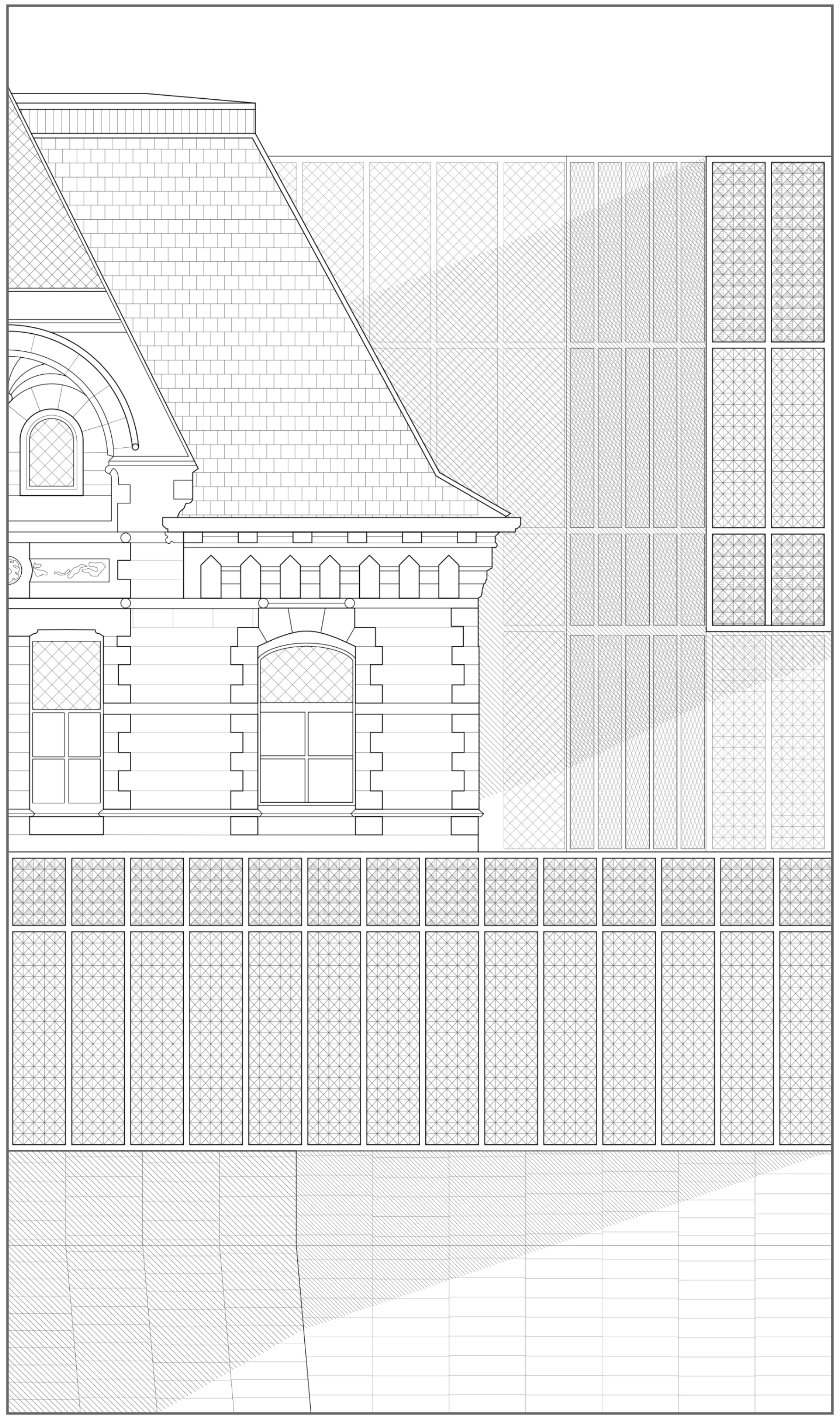
What form does this new library take?

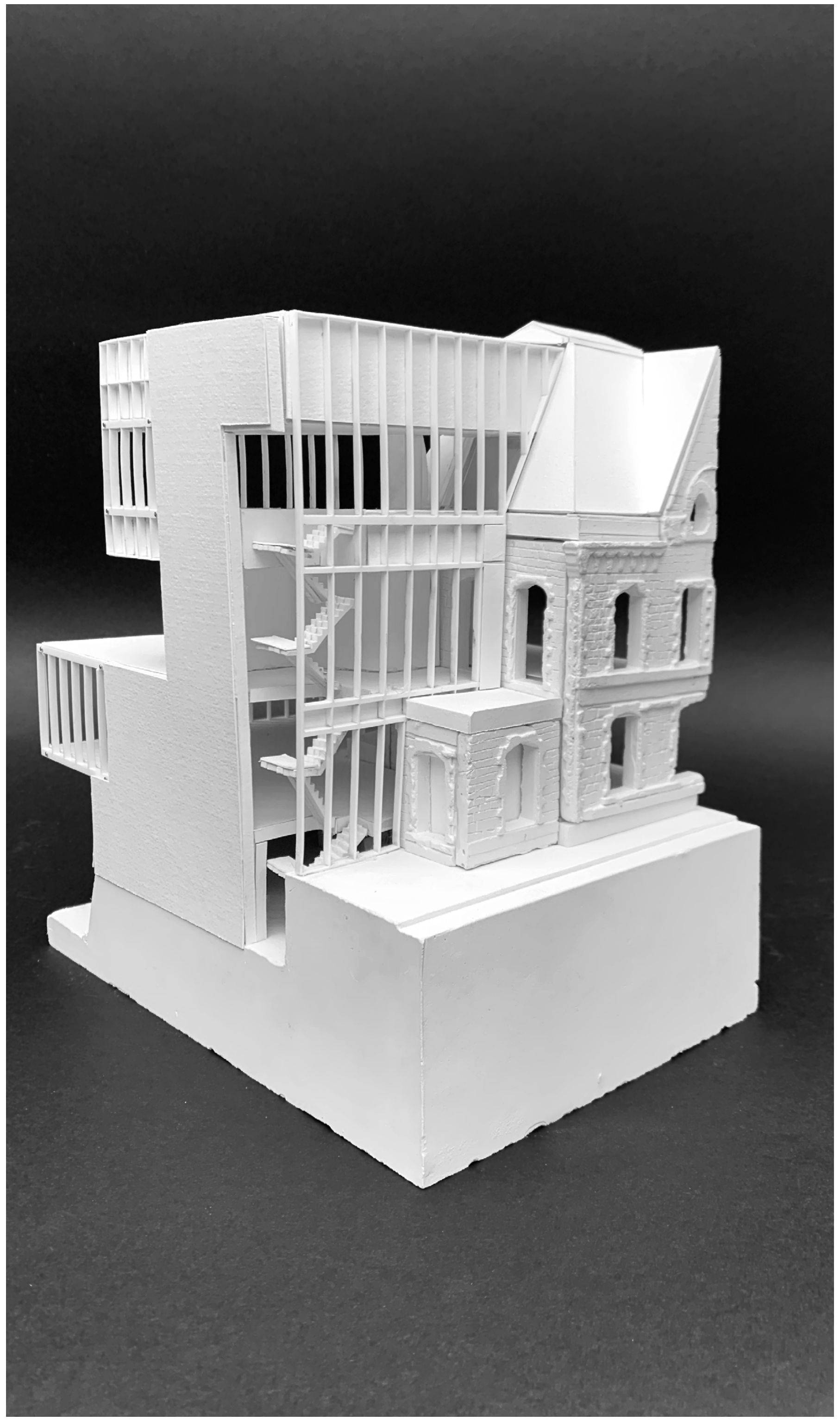


Idea Exchange | Old Post Office
RDHA Architects
2019



The central library as a place for people and not books

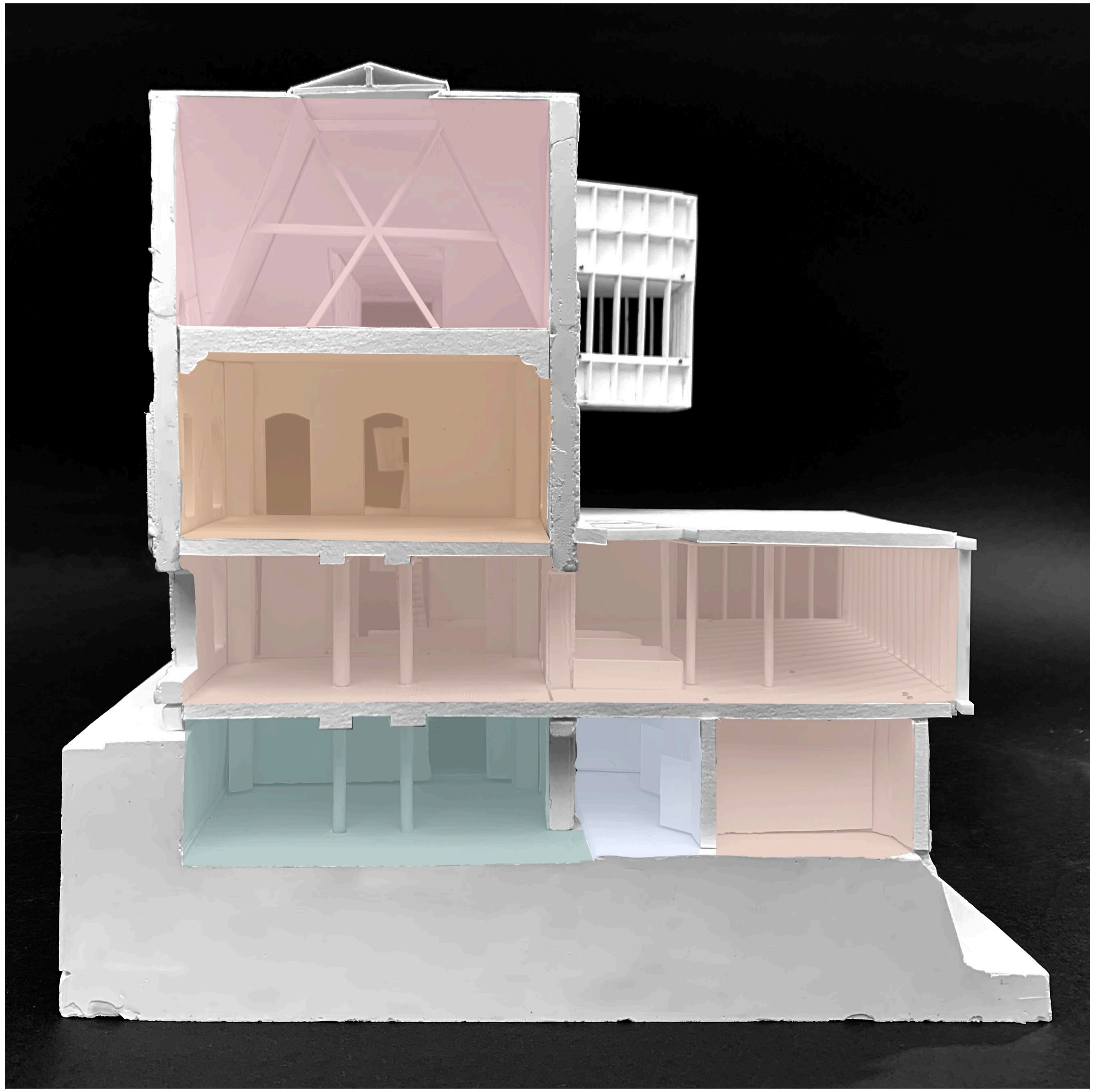




Elevation of Idea Exchange Old Post Office

Reusing old civic structures

1:100 Precedent Study Model



● Teenager

● Retiree

● Circulation

● Open space

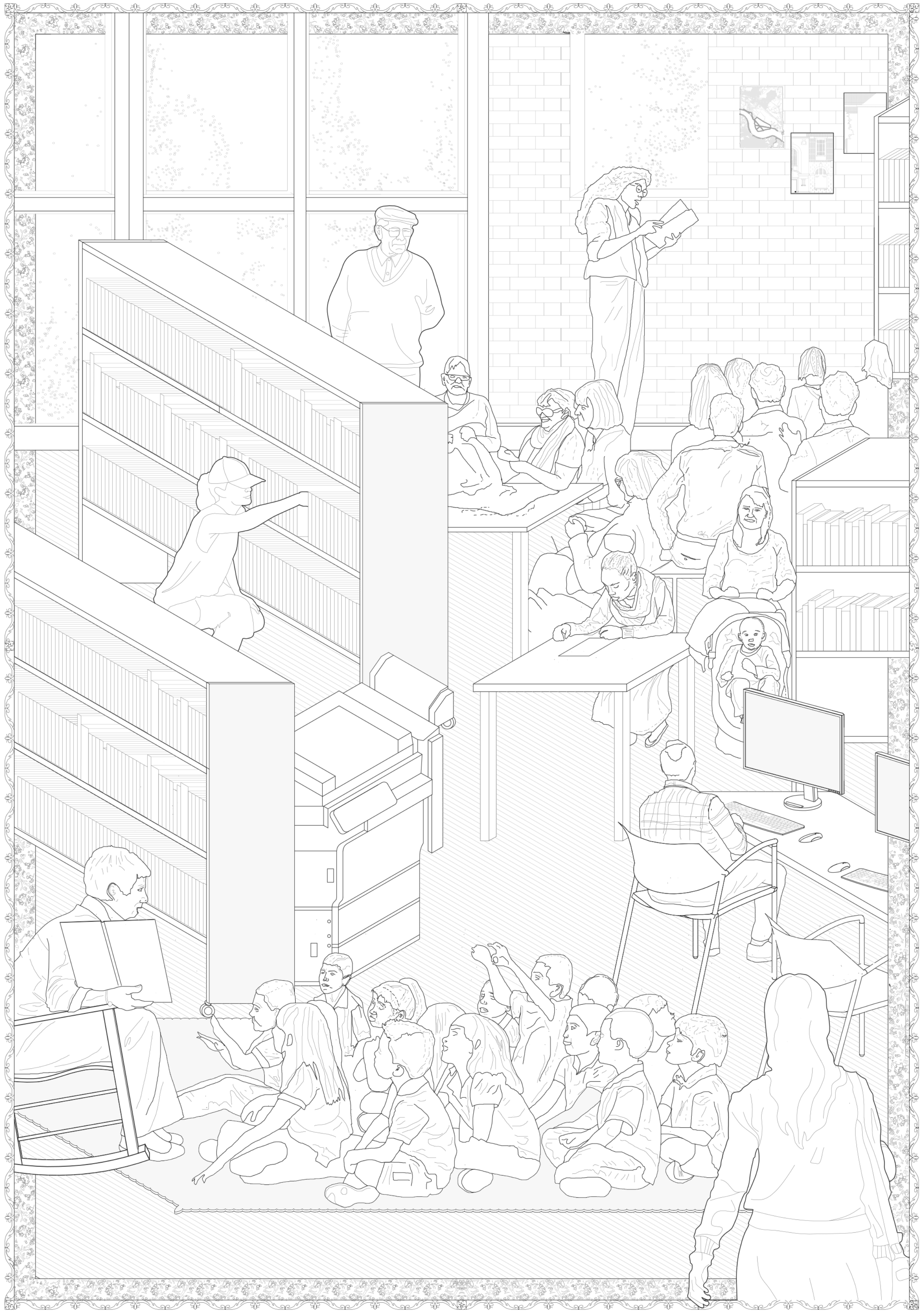
● Children

Distribution of space in the building

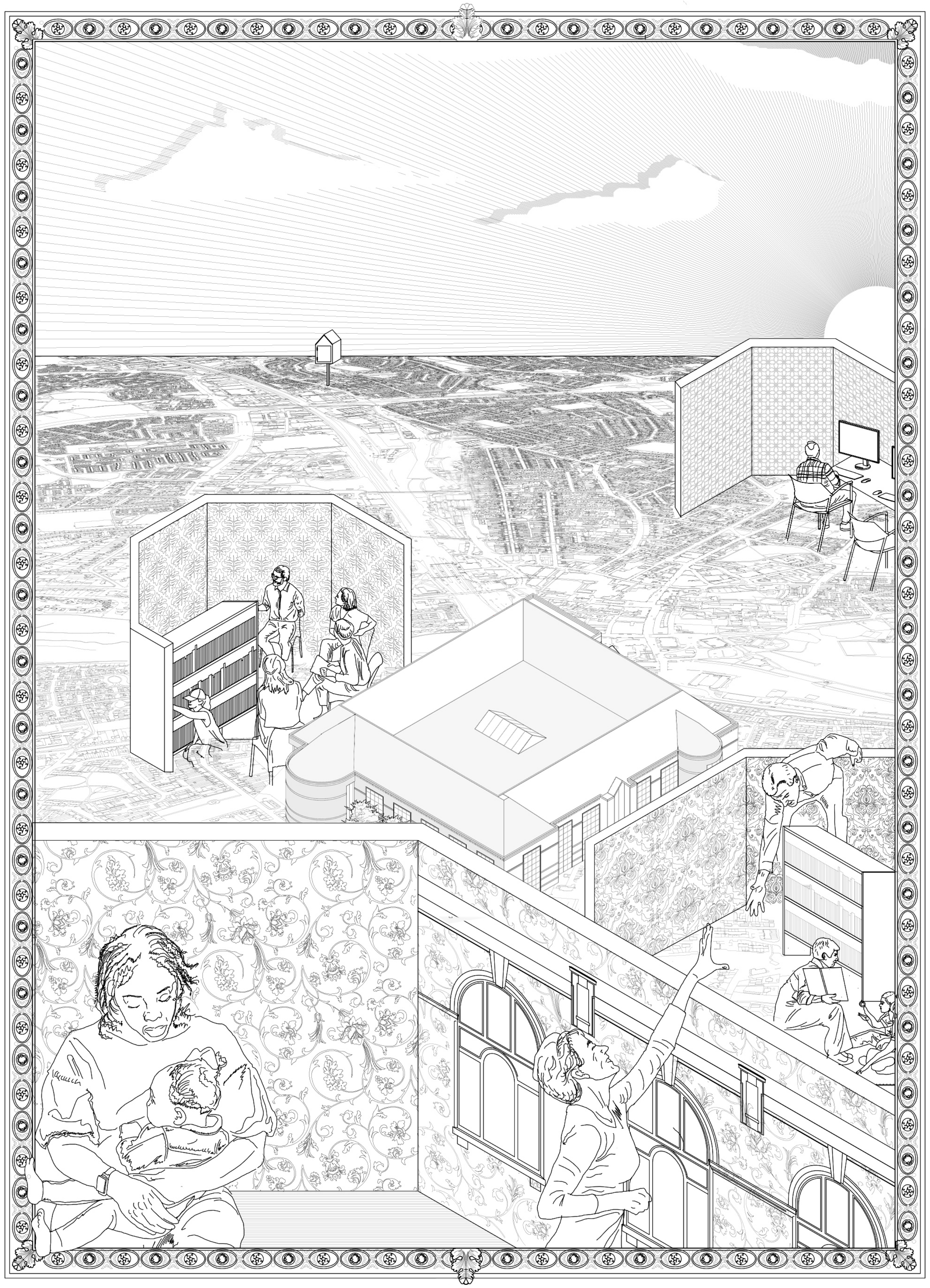
The design divides up different users, creating an in-cohesive design

1:100 Precedent Study Model

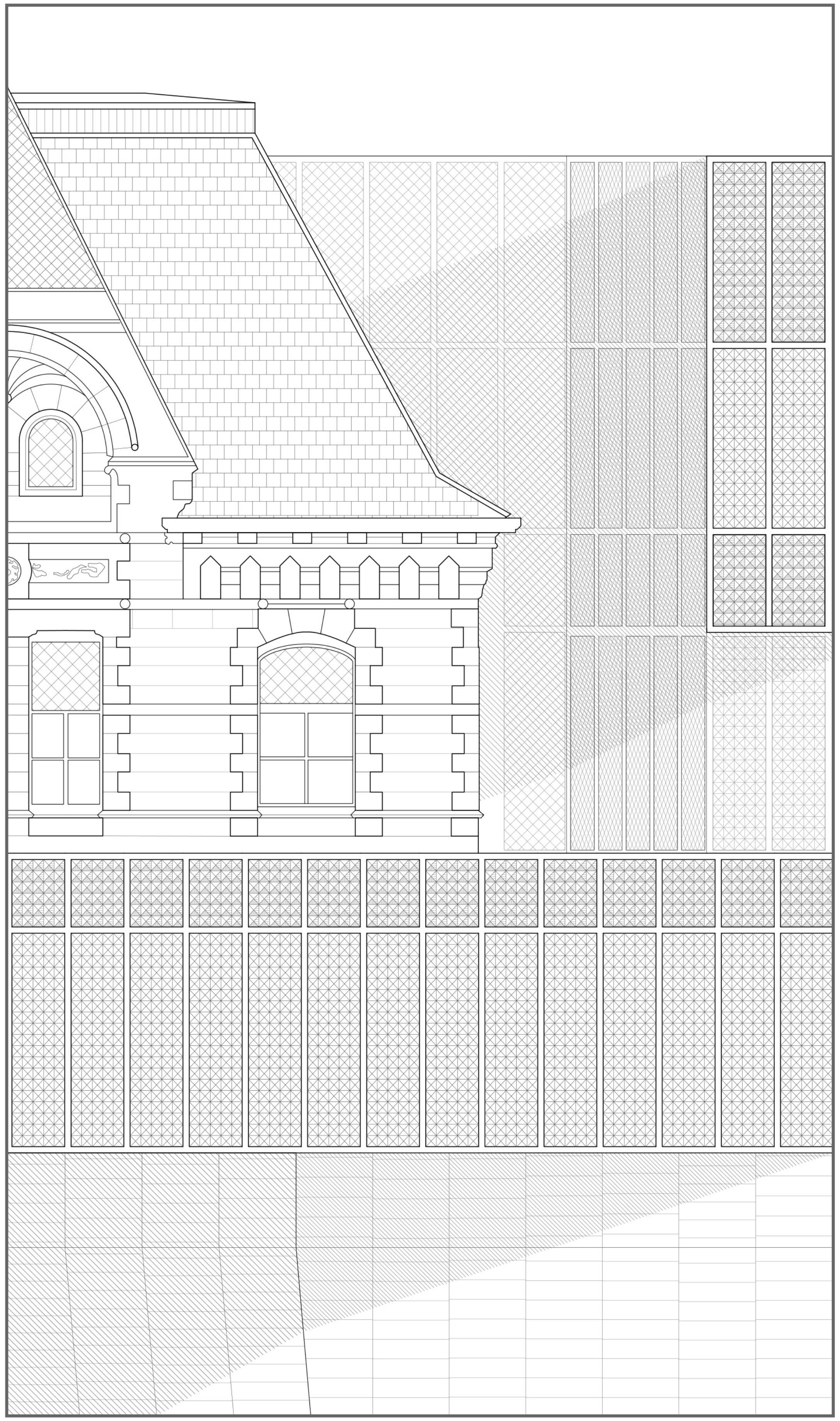
What are the principles for designing Peterborough’s Library?



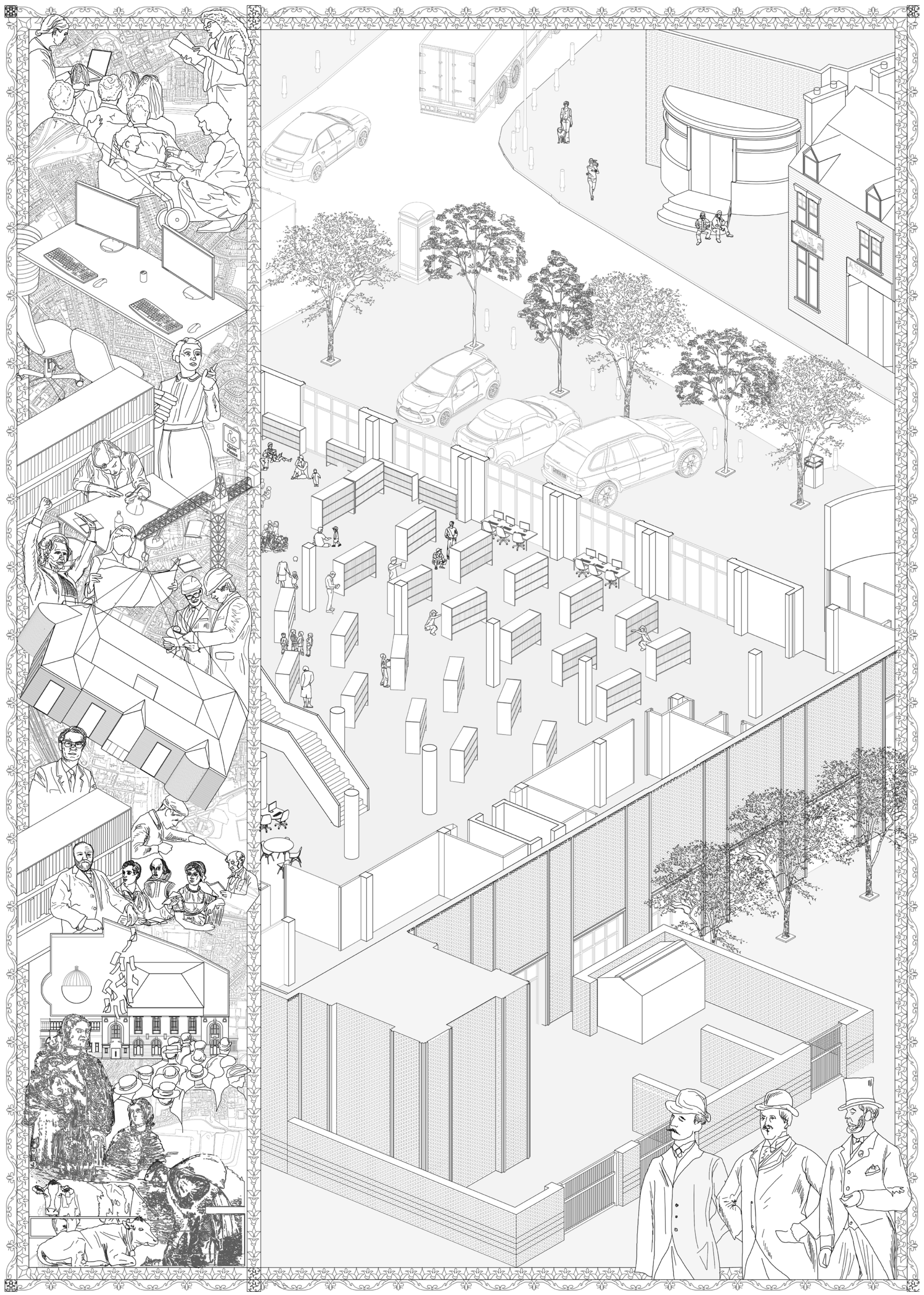
A place defined by its users



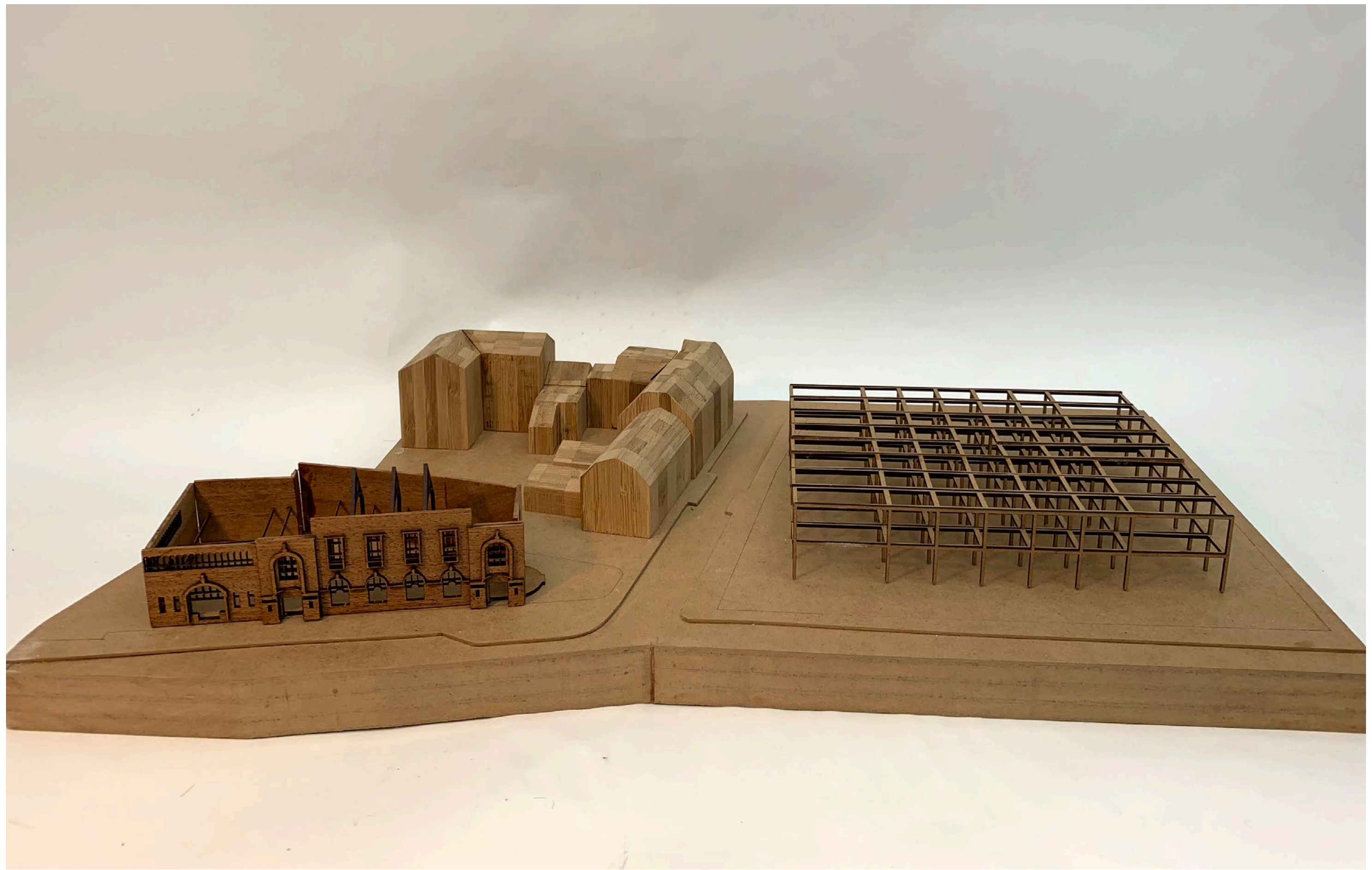
Embedded in a library network

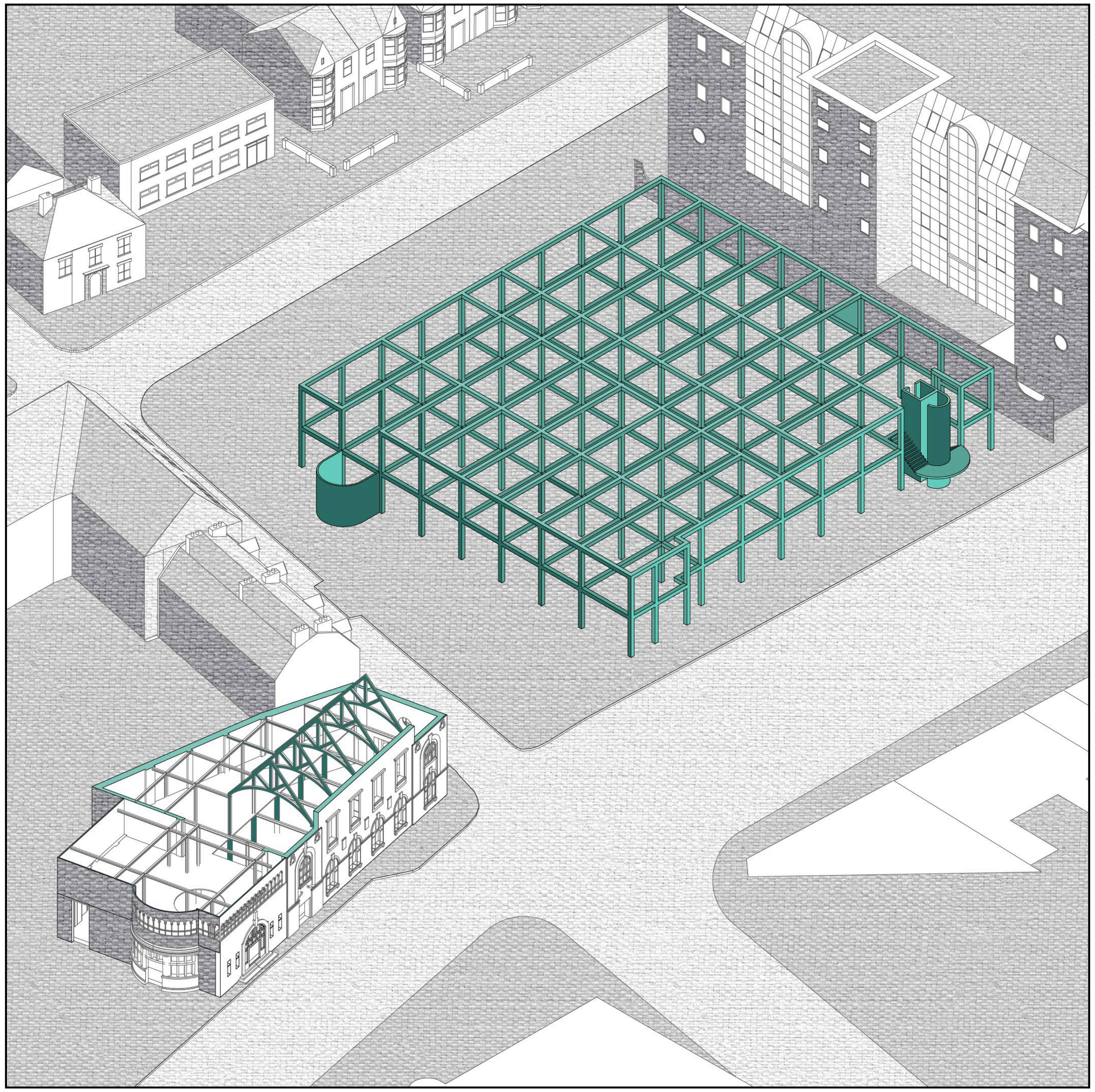


Working with existing buildings



Building on the complex planning history

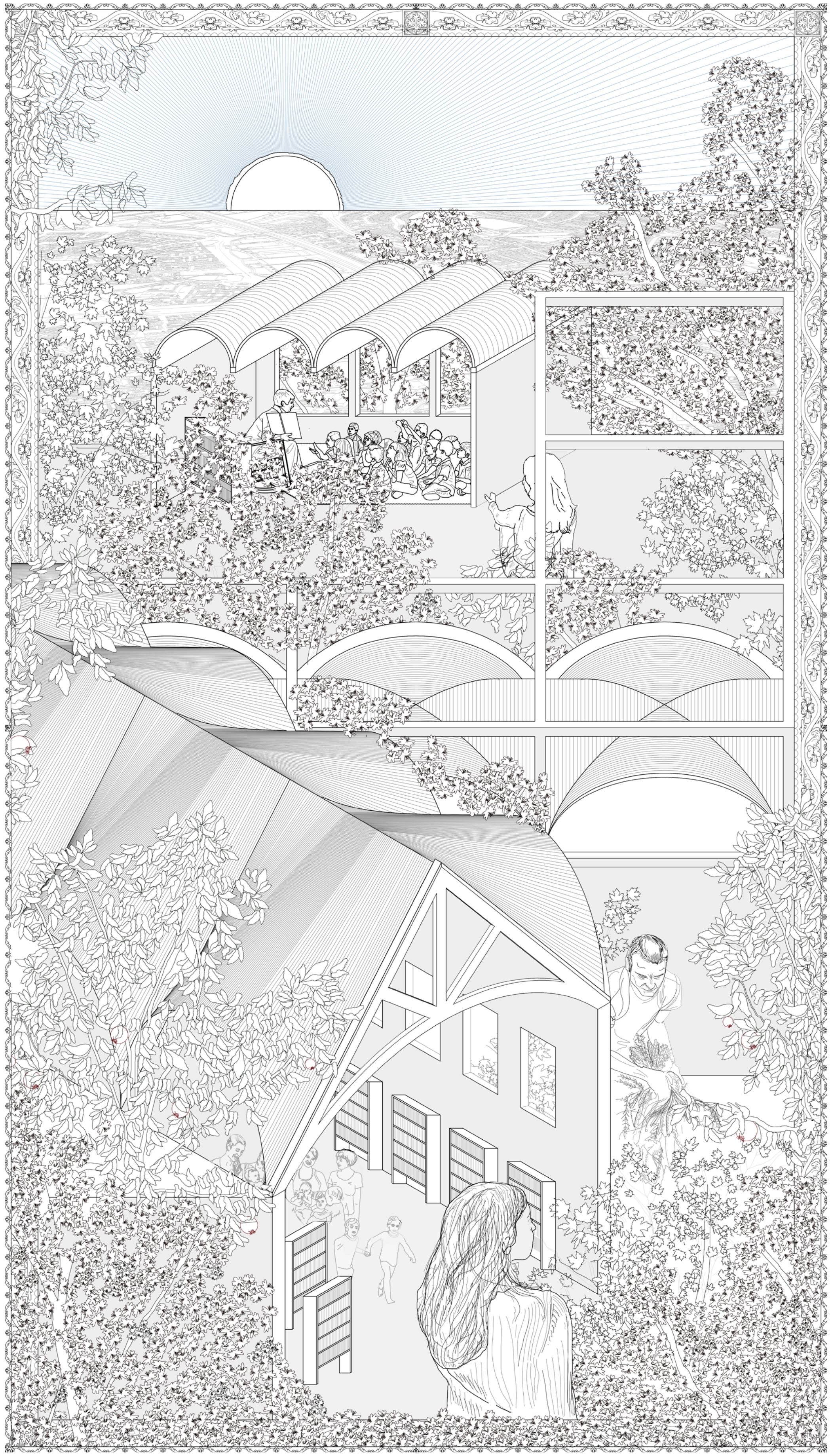




1:200 Structural Model

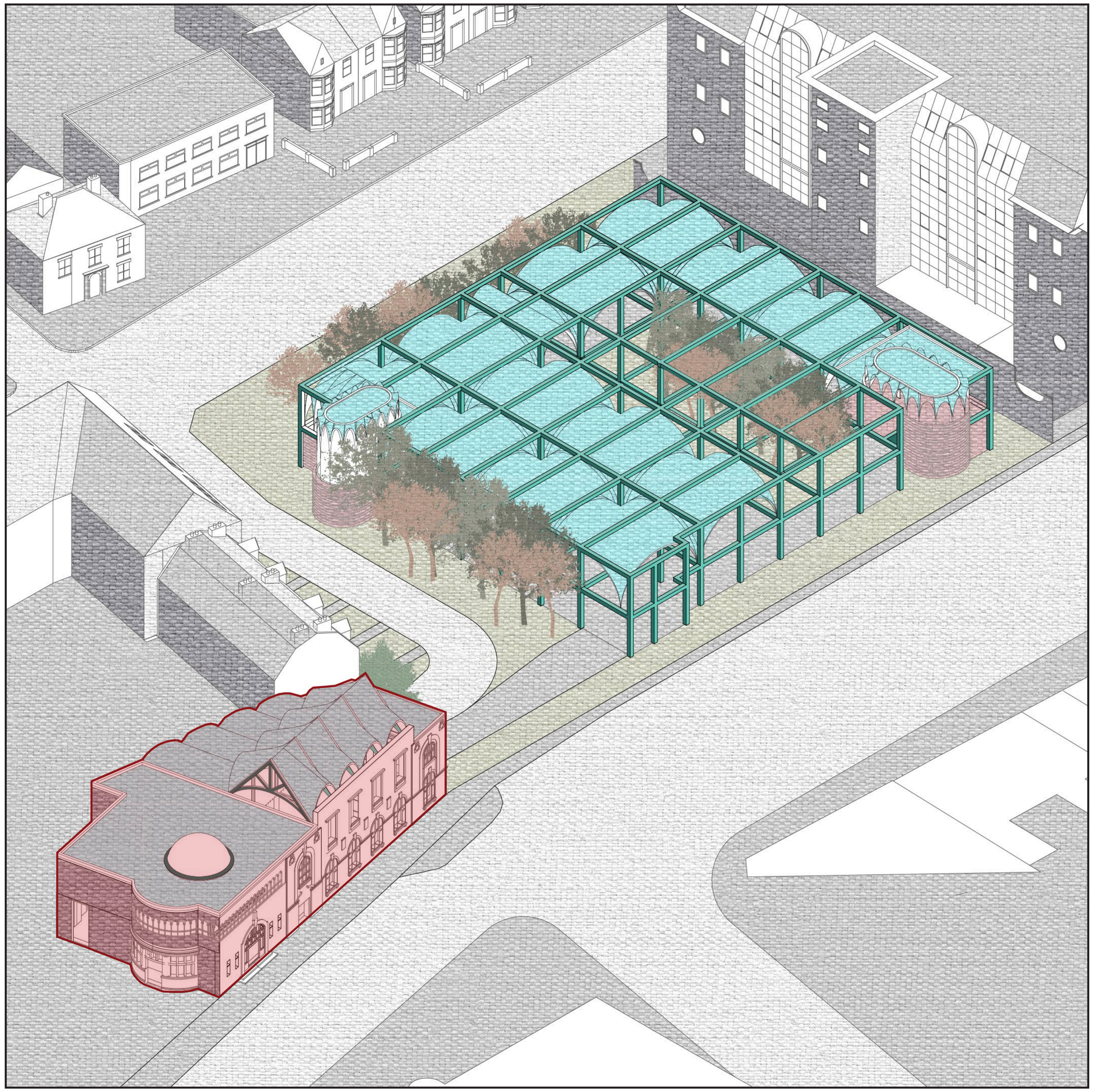
Working from what's already there

50m

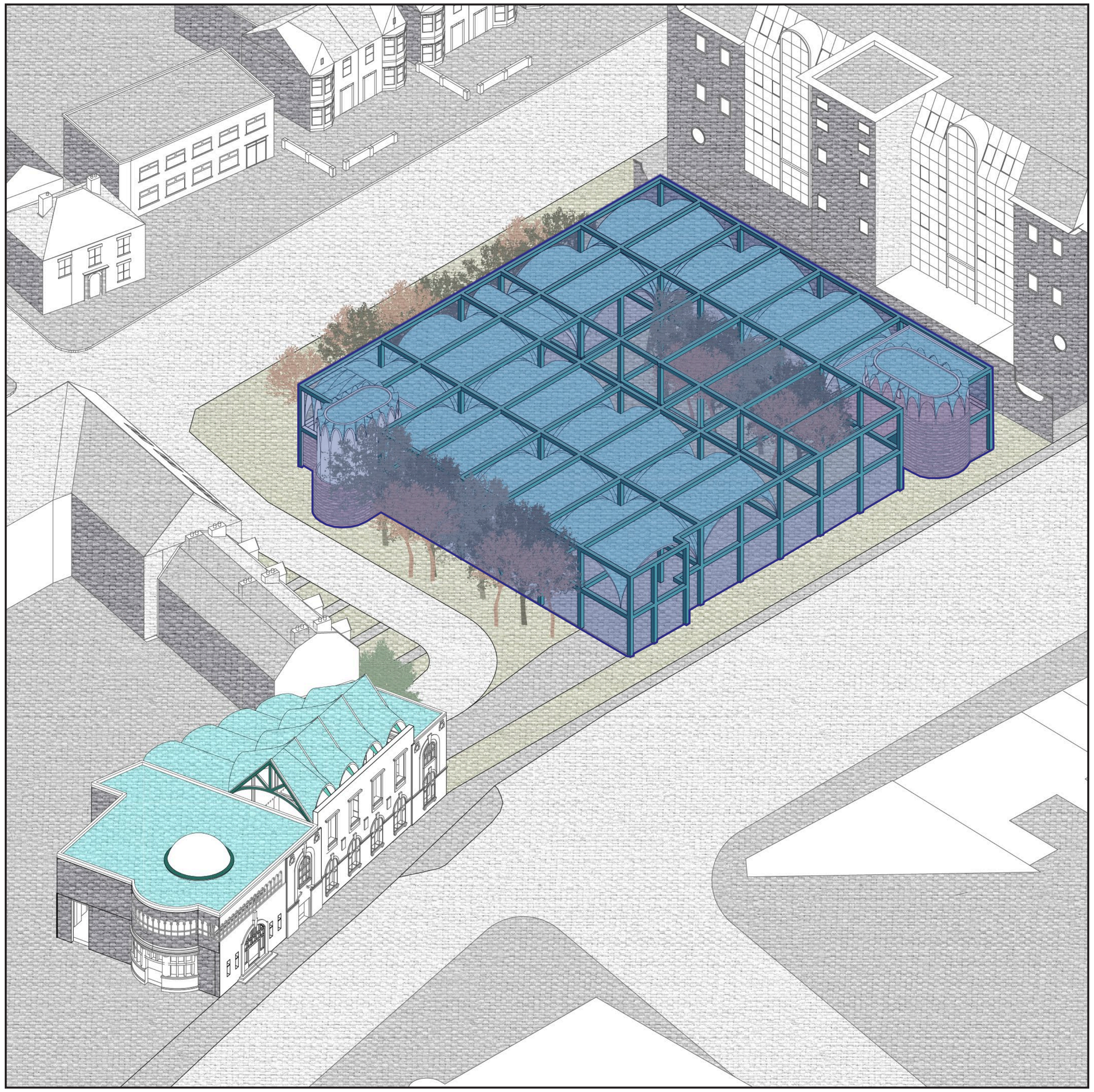


Creating a network of buildings in a garden

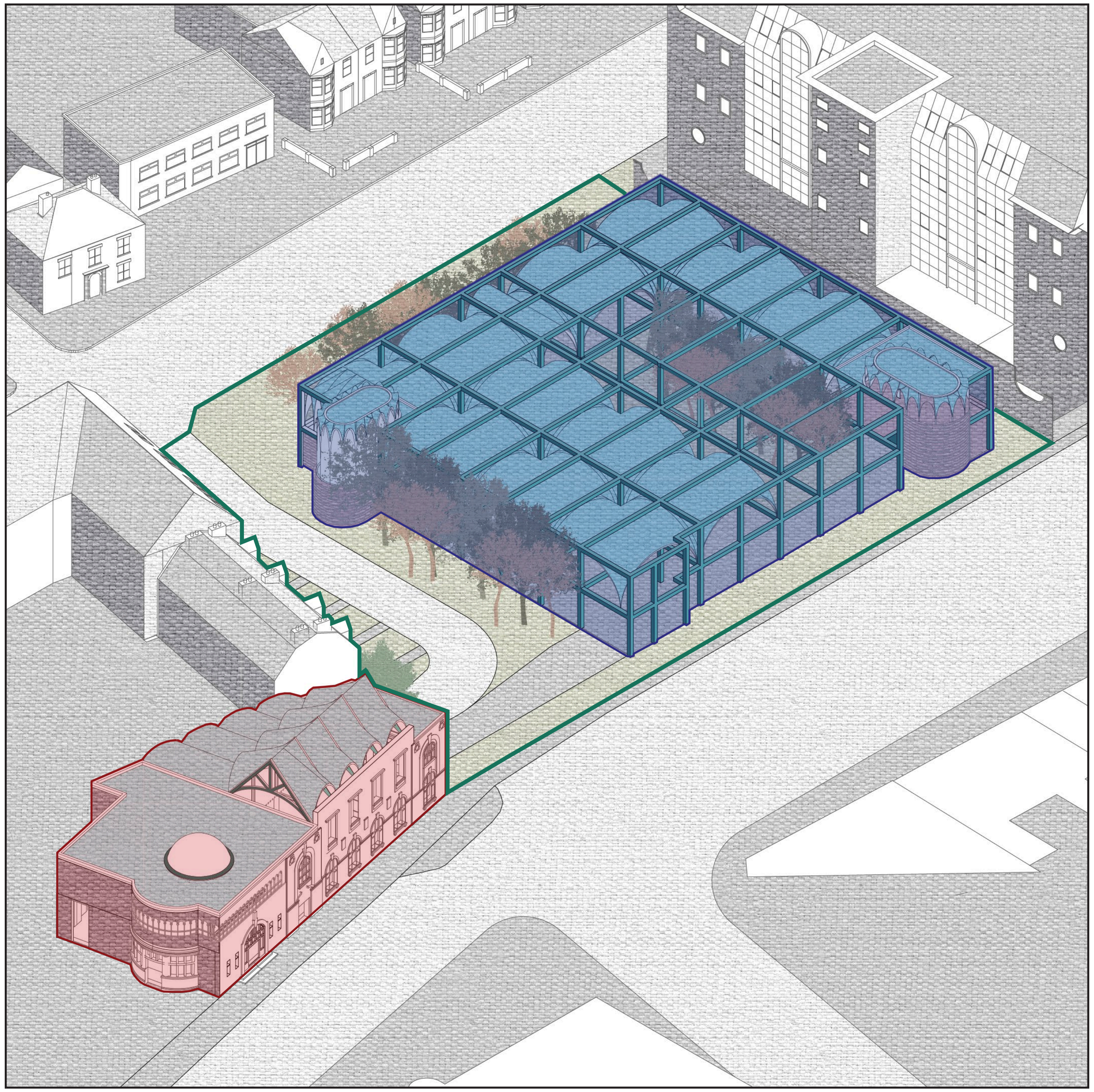
Miniature 6: The library and the Garden
Matteo da Milano Breviario di Ercole I d'Este
David salmista, 1502-1505



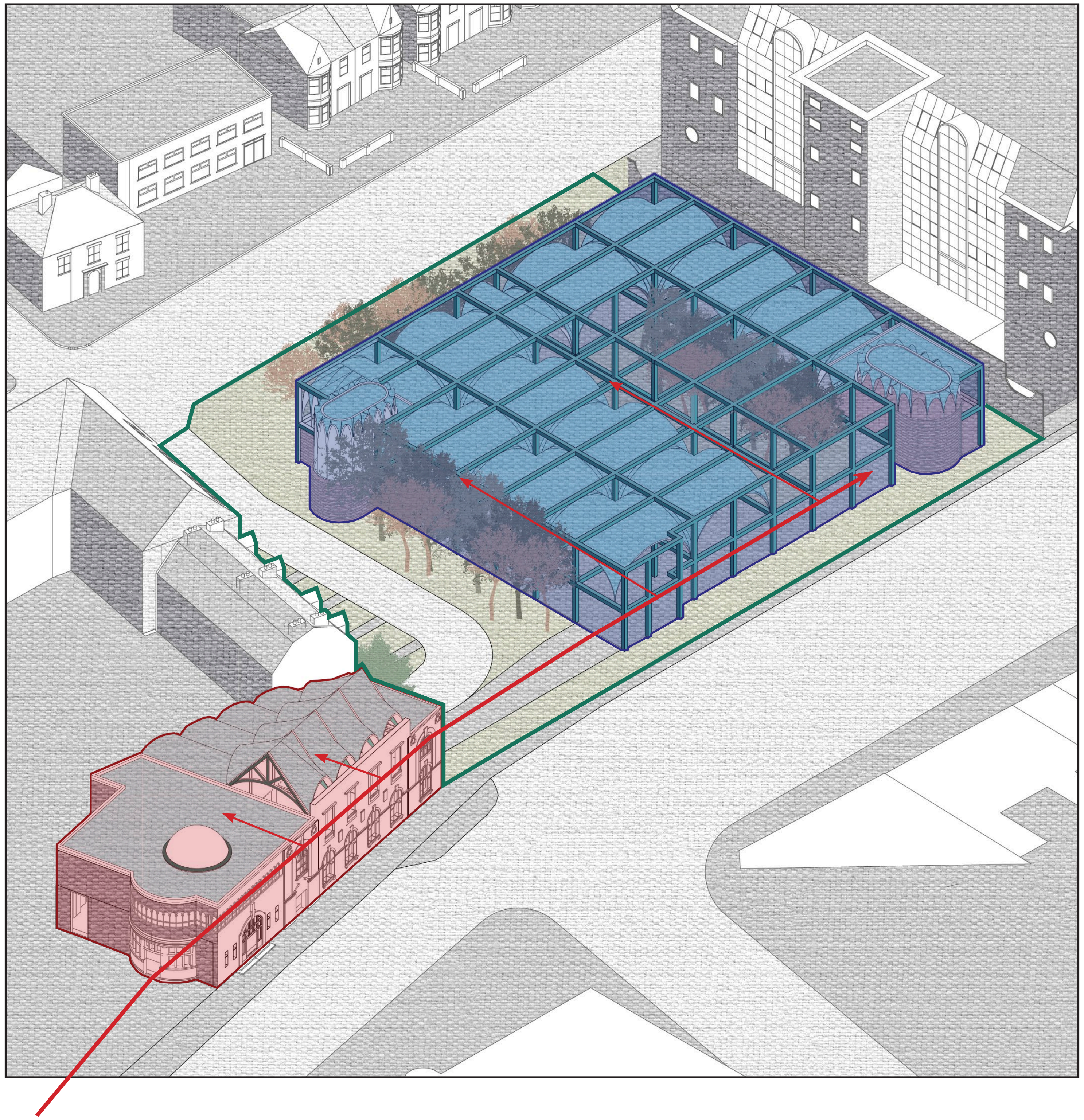
Establishing a consolidated library..



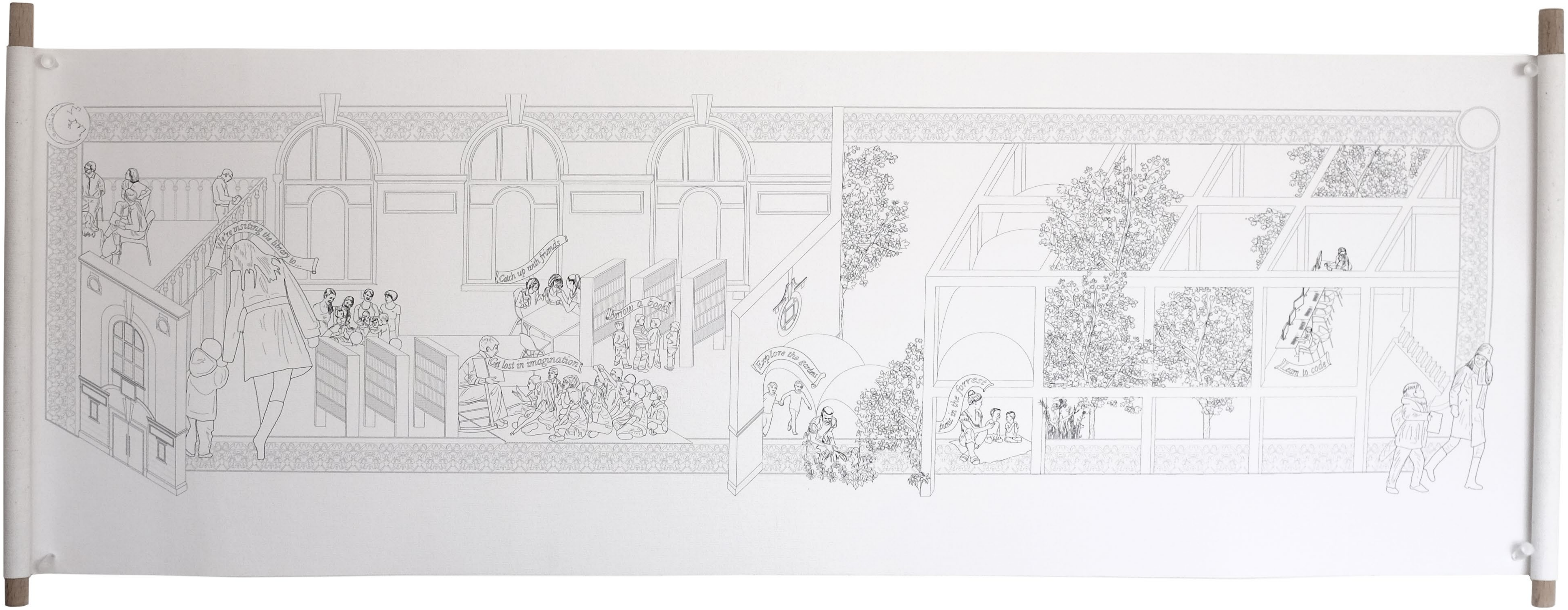
..and a flexible space



A consolidated library and flexible space enmeshed in a garden



Connecting functions through a central route



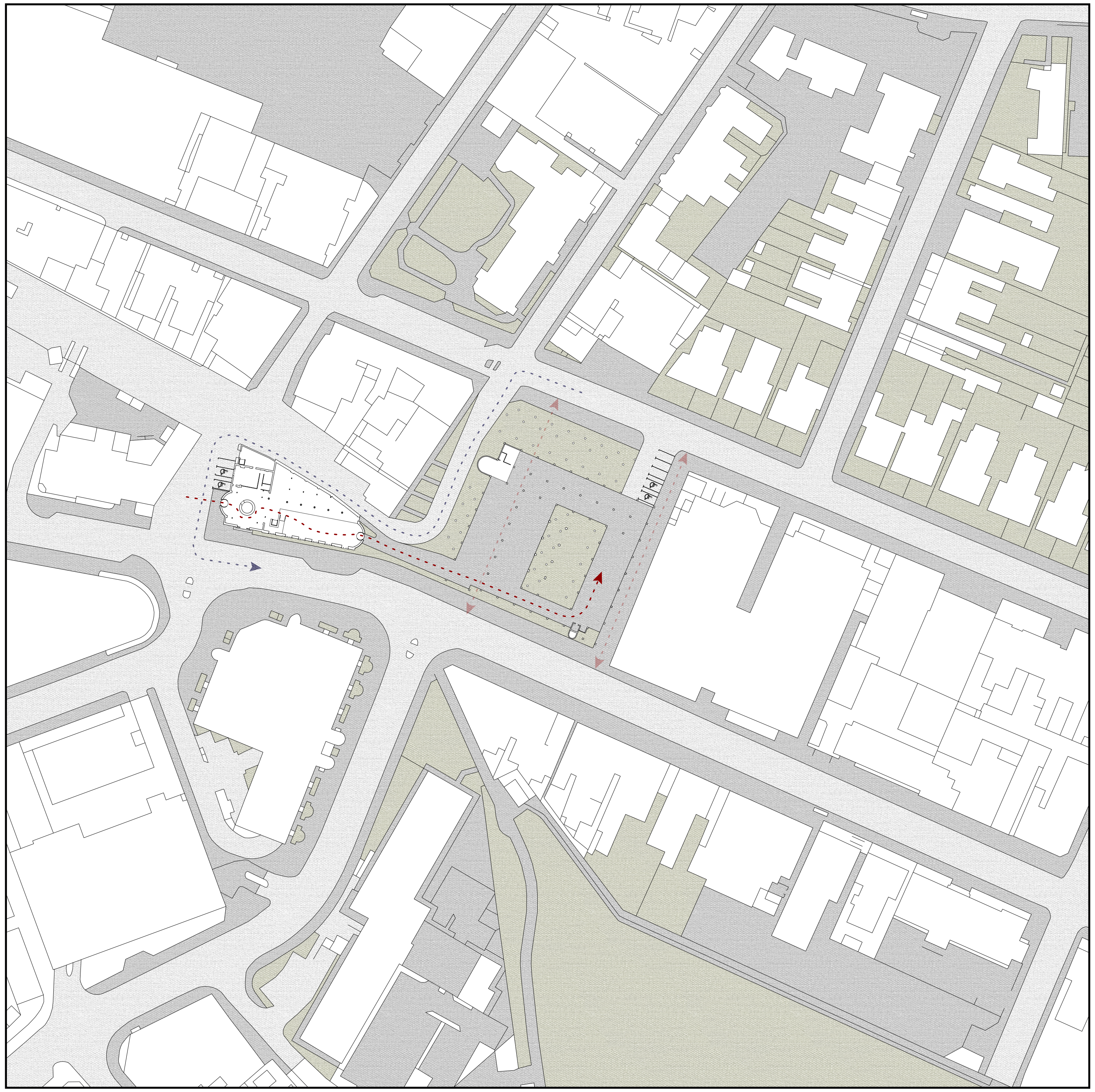
The building unfolds, like a scroll

Along the River During the Qingming Festival
Zhang Zeduan
1085–1145

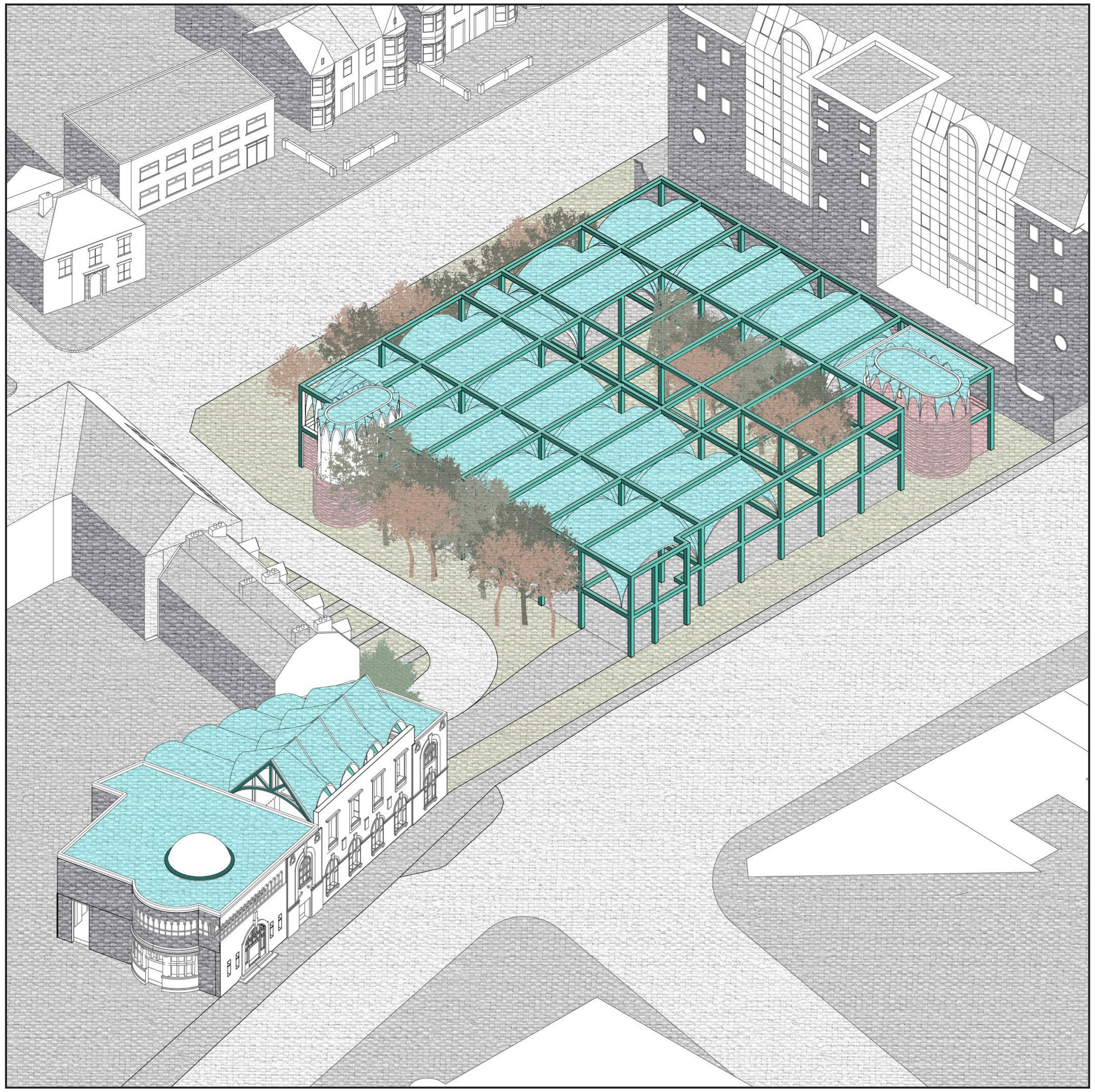
3

PATCHWORK PALIMPSEST

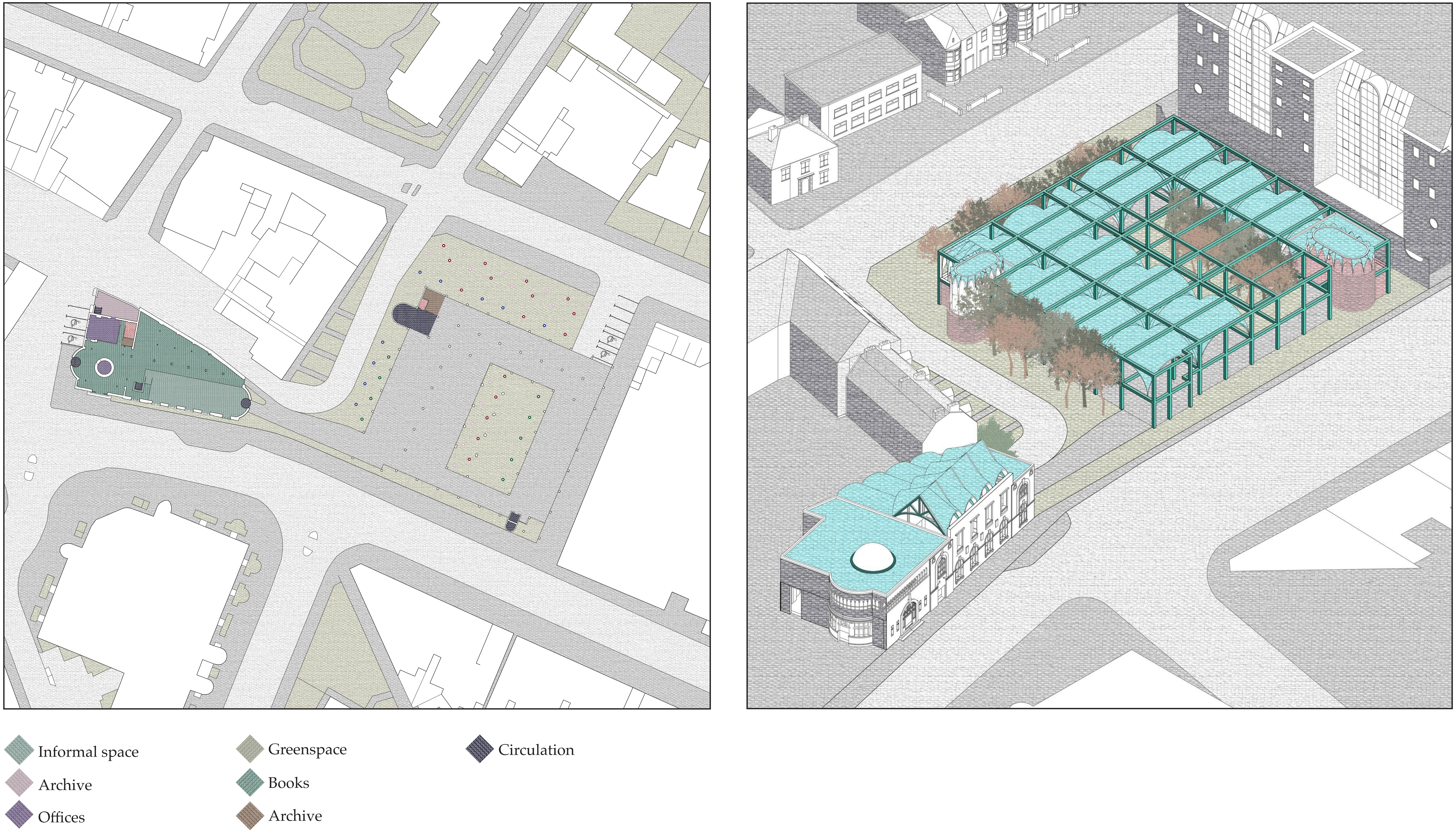
Sewing Peterborough’s Libraries Together



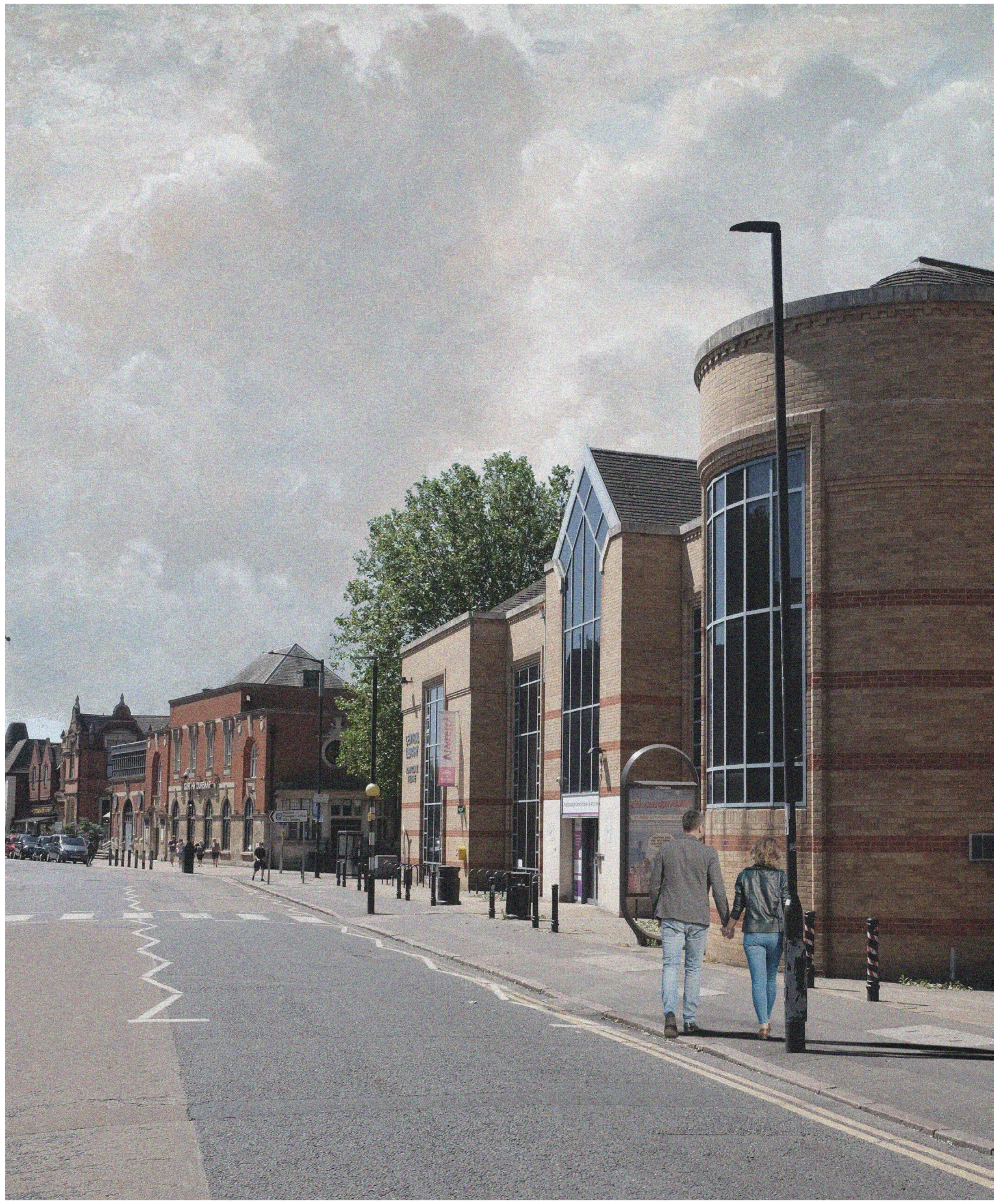
------Access Road
(Pedestrianised 9am-9pm
------Pedestrian Access

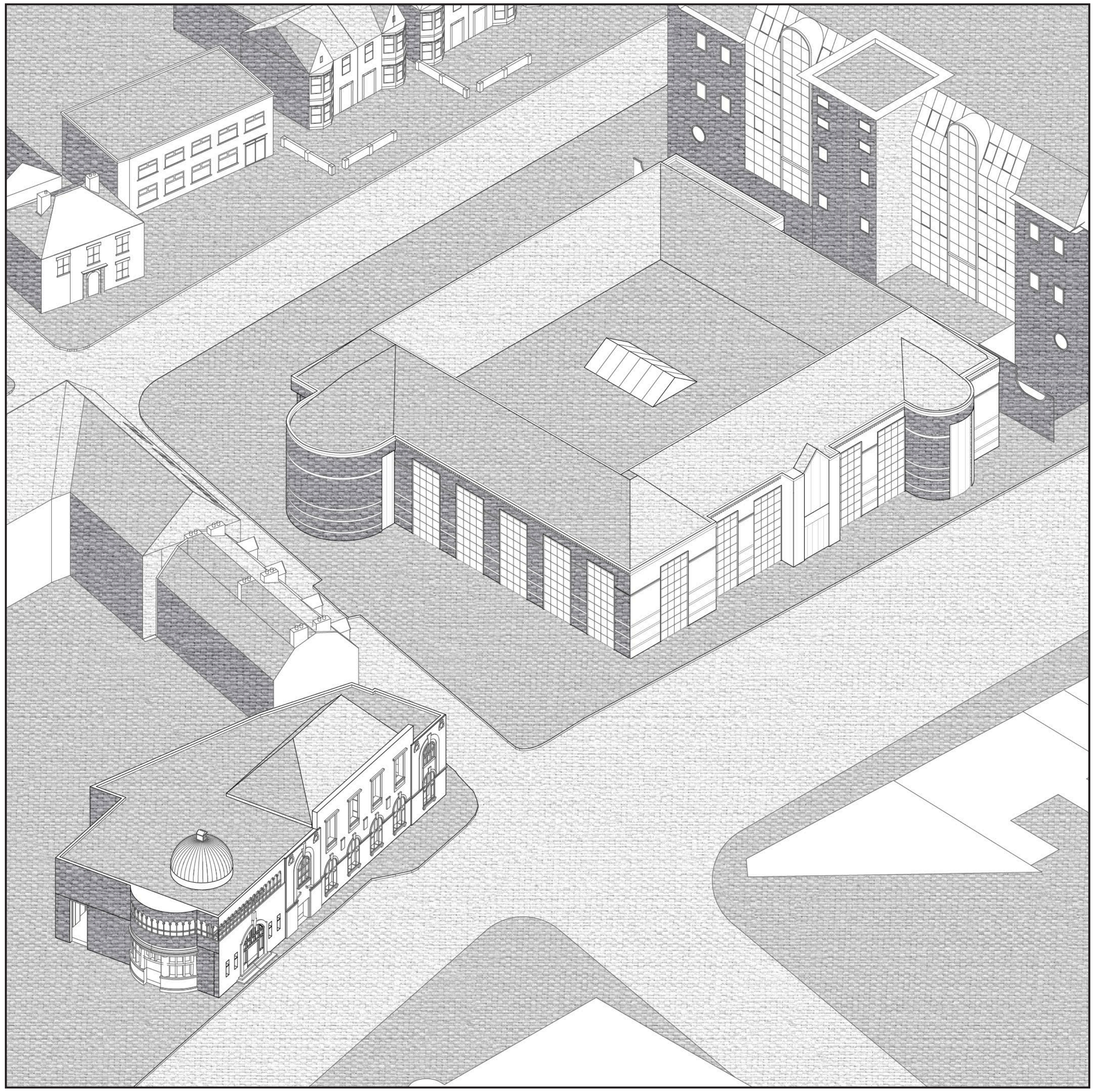


Weaving into the city

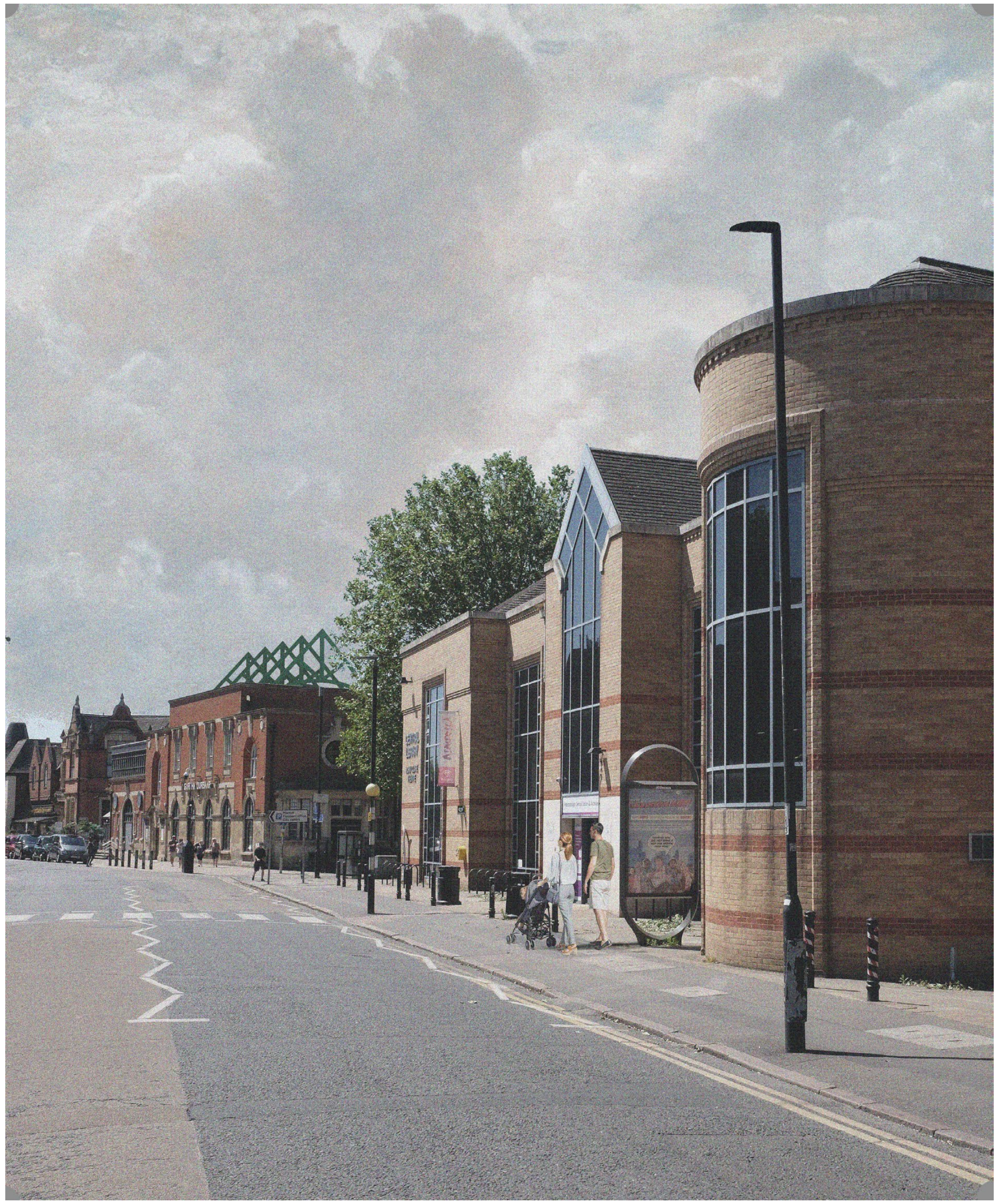


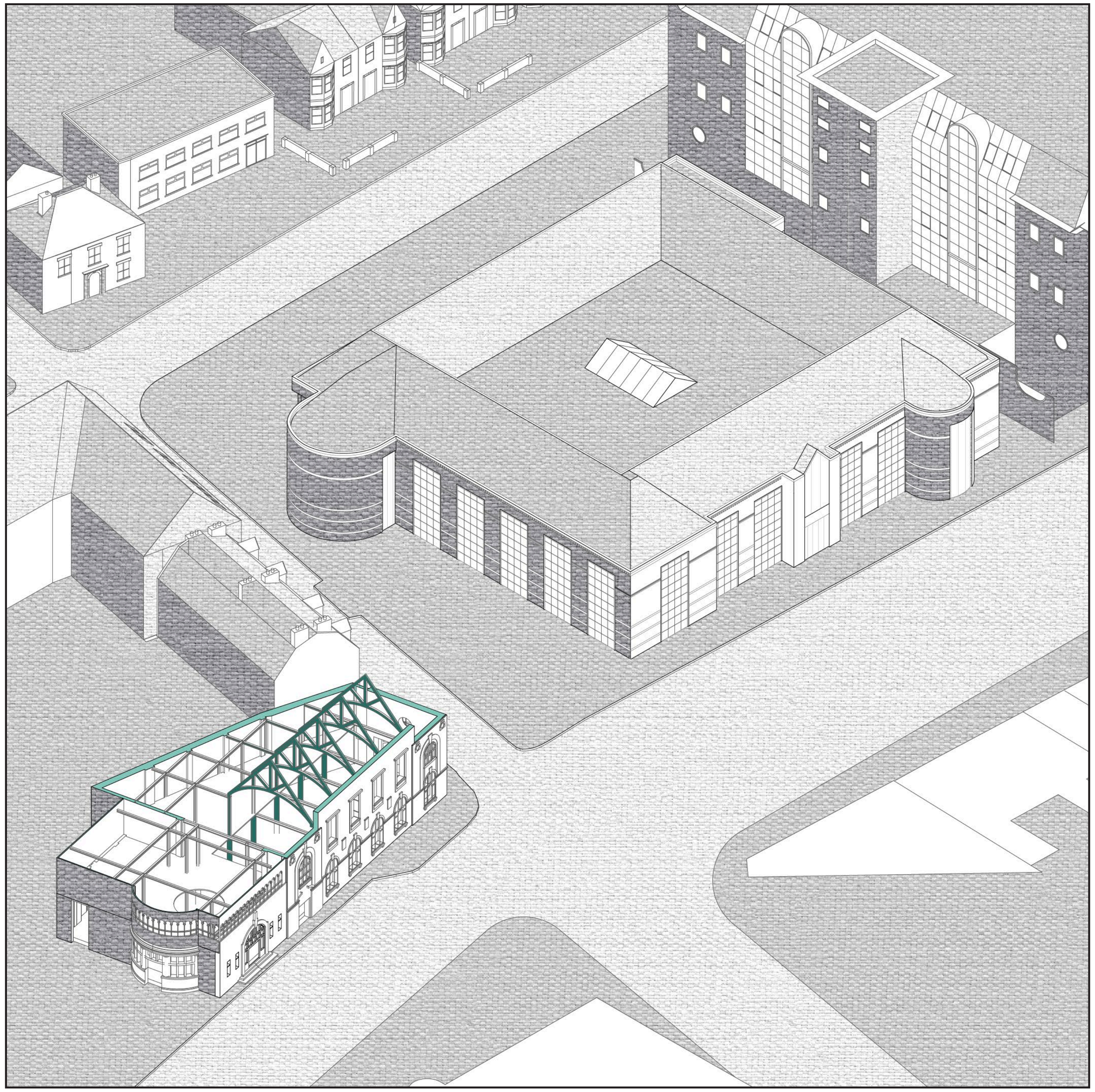
Distribution of spaces





2020: Phase 0
Existing Layout

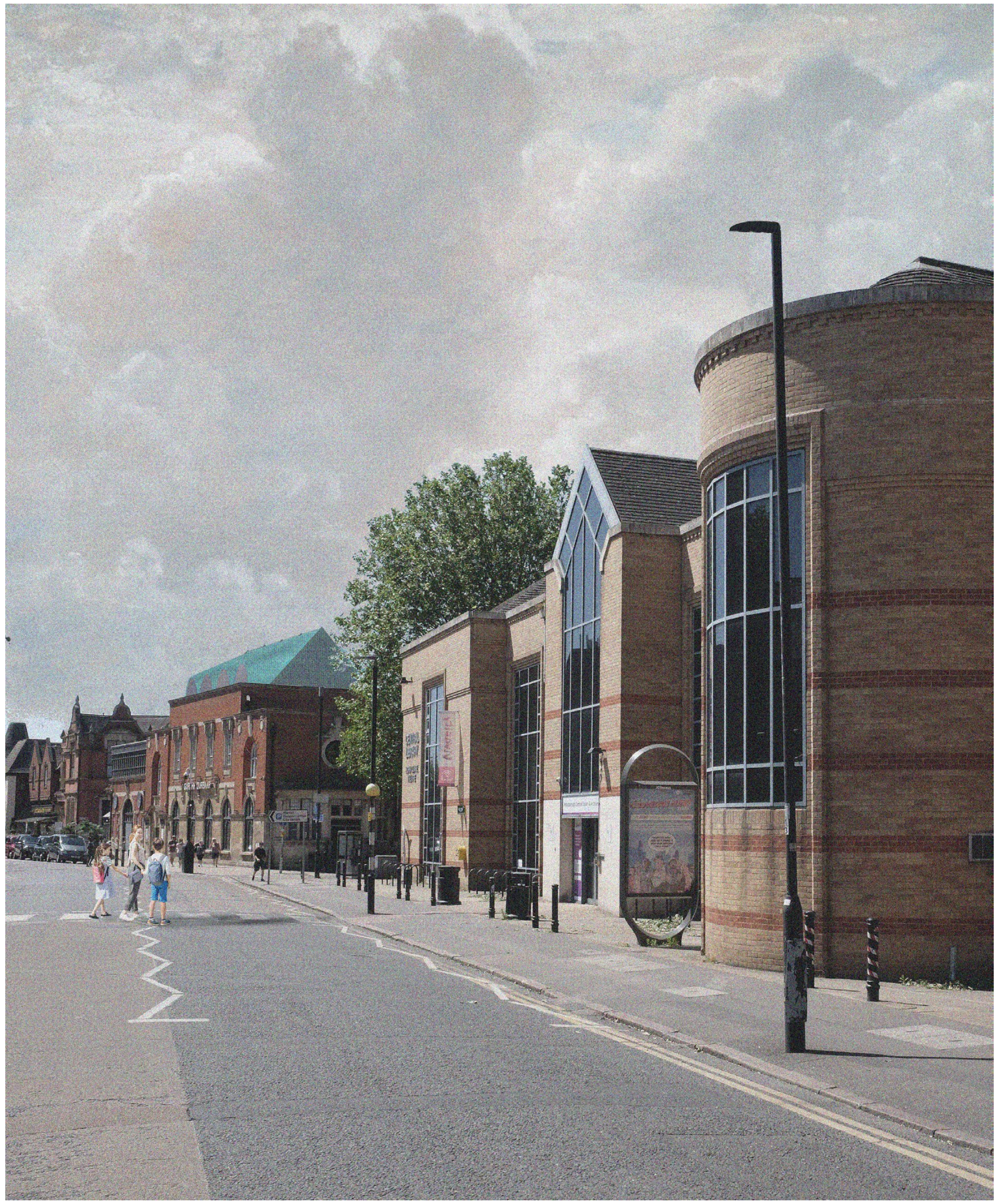


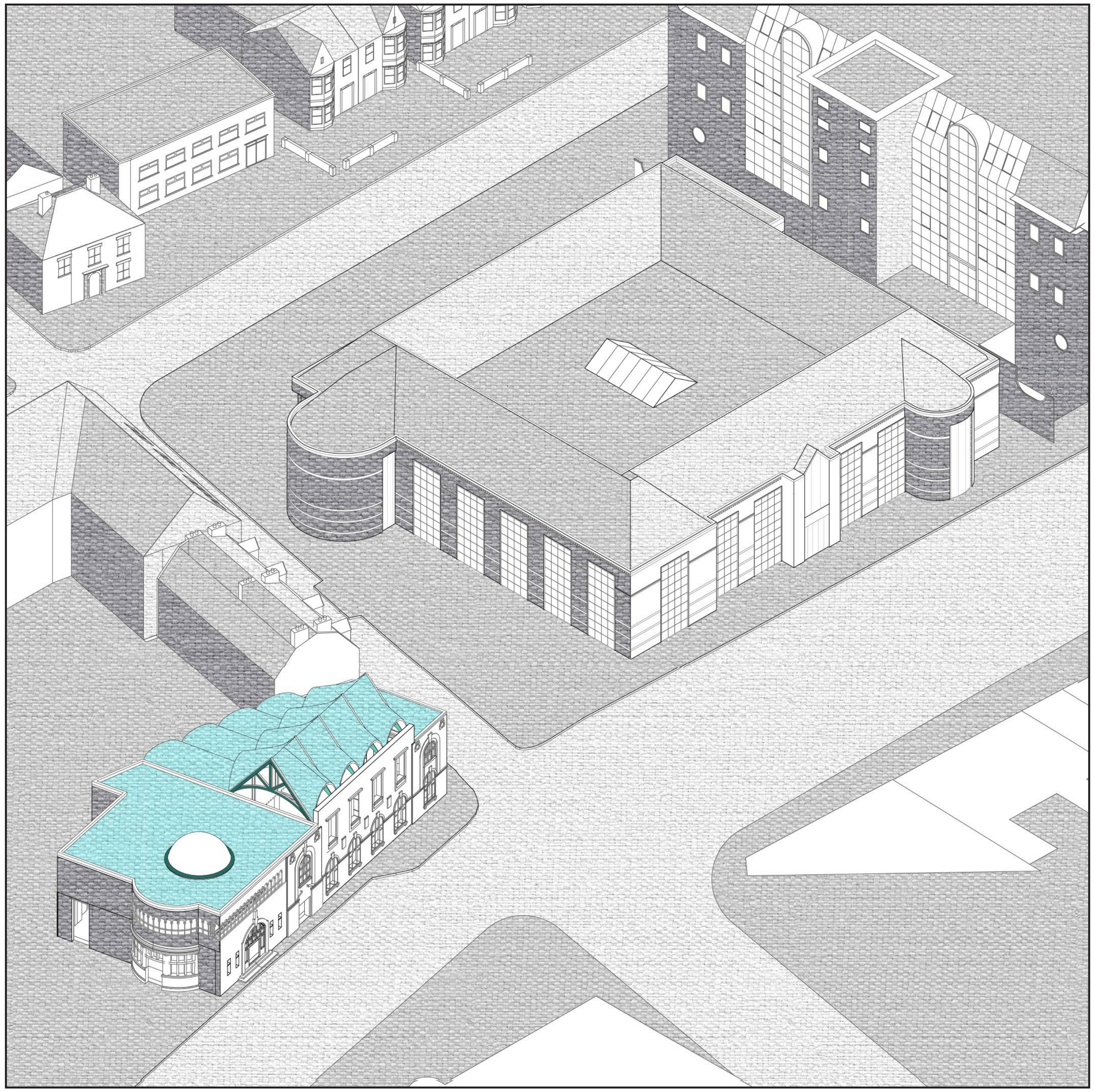


2021: Phase 0-1

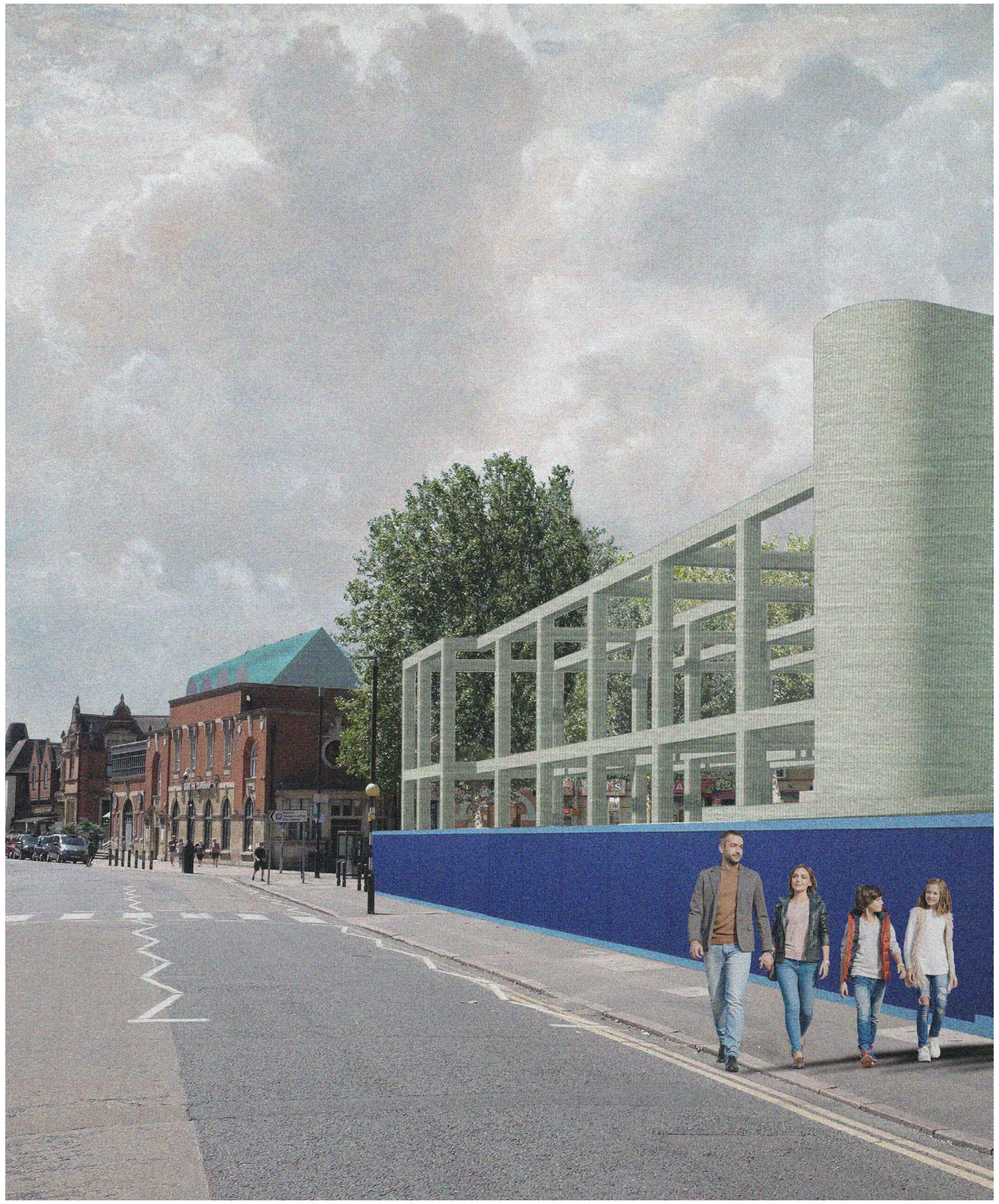
Construction begins on the Carnegie Library. Central Library remains open*

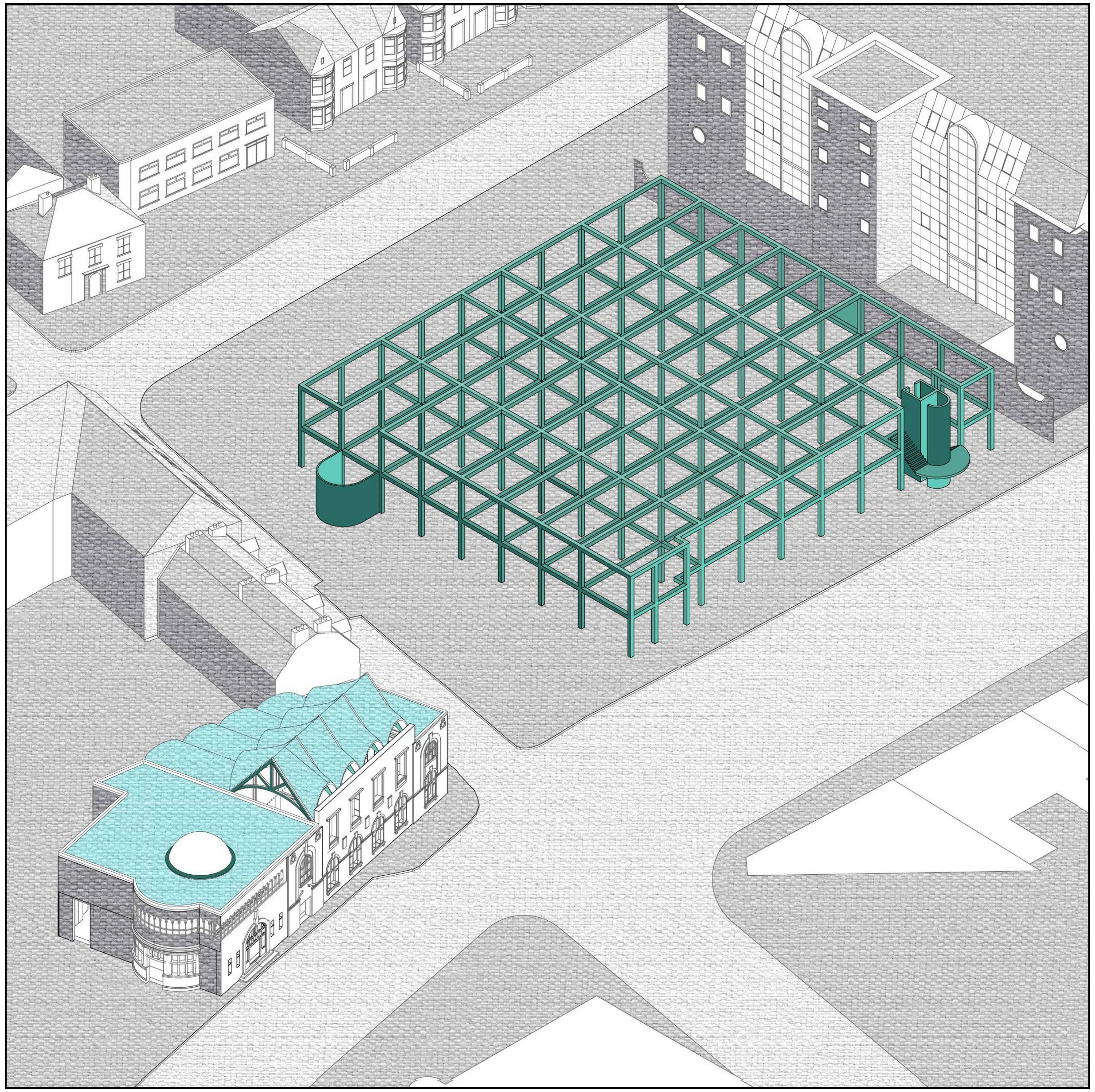
*To construct the new Carnegie Roofs, the Central library’s truck access will be dismantled for concrete aggregate.





2022-2023: Phase 1
Carnegie Library is completed, services move in

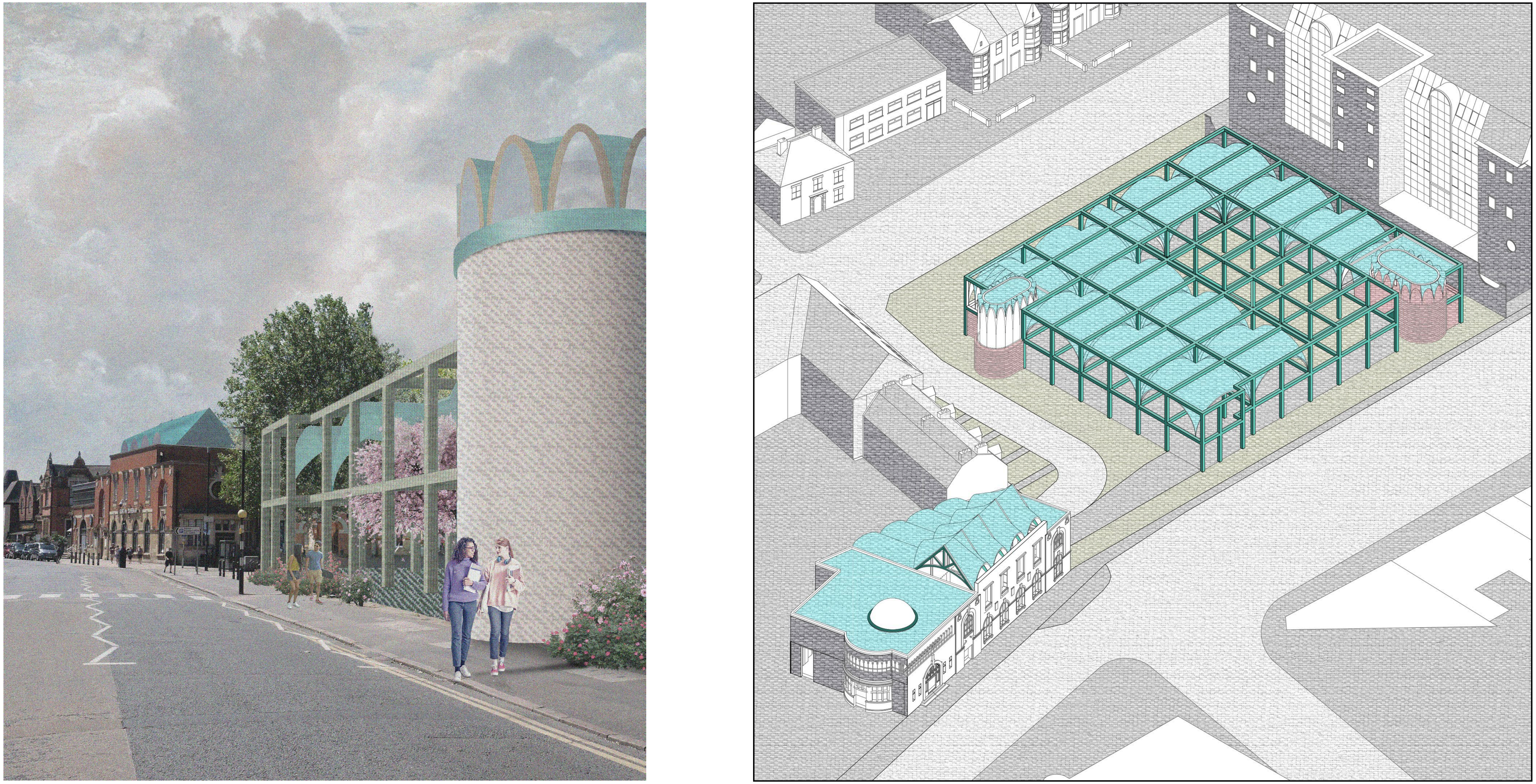




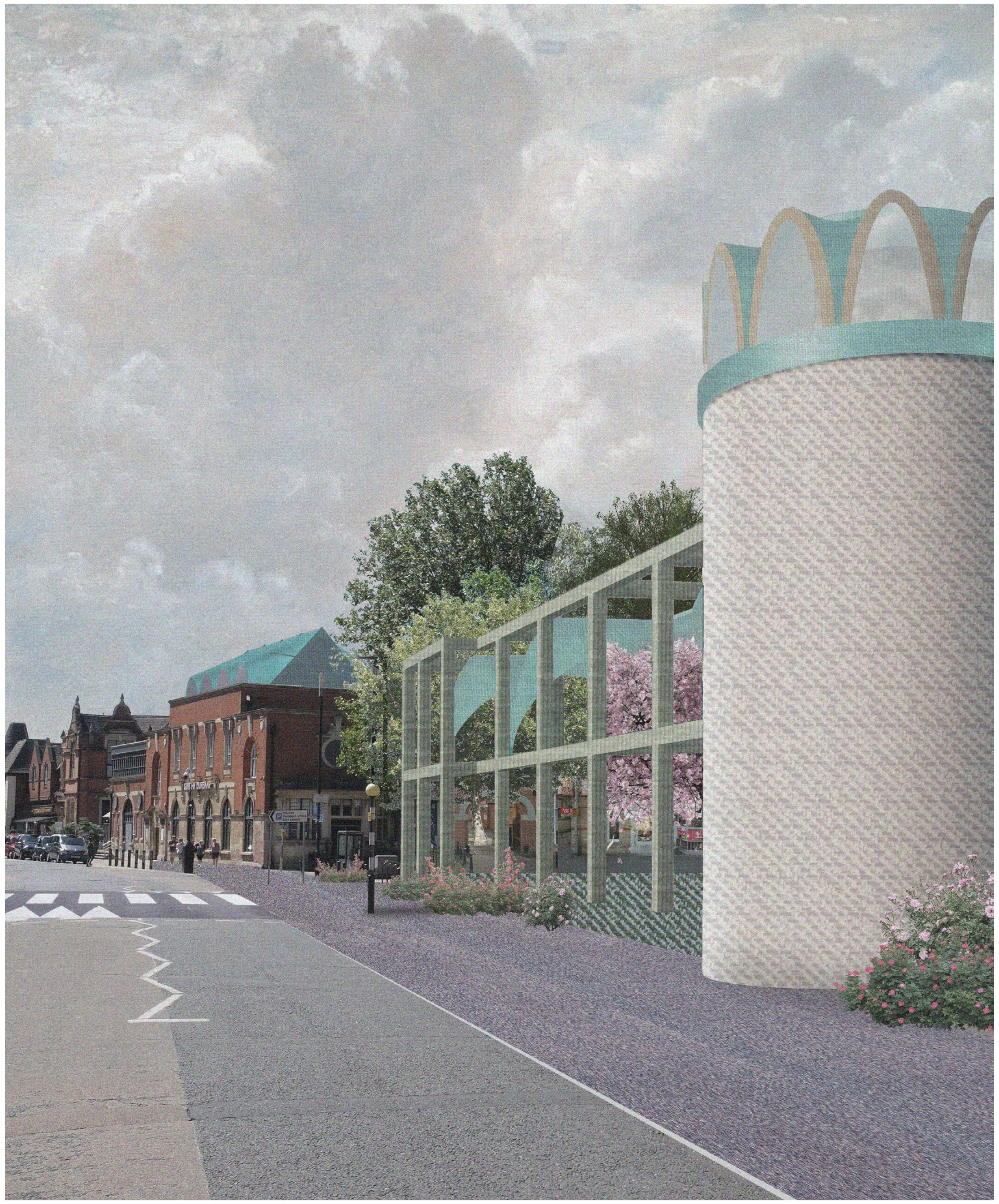
2023: Phase 2

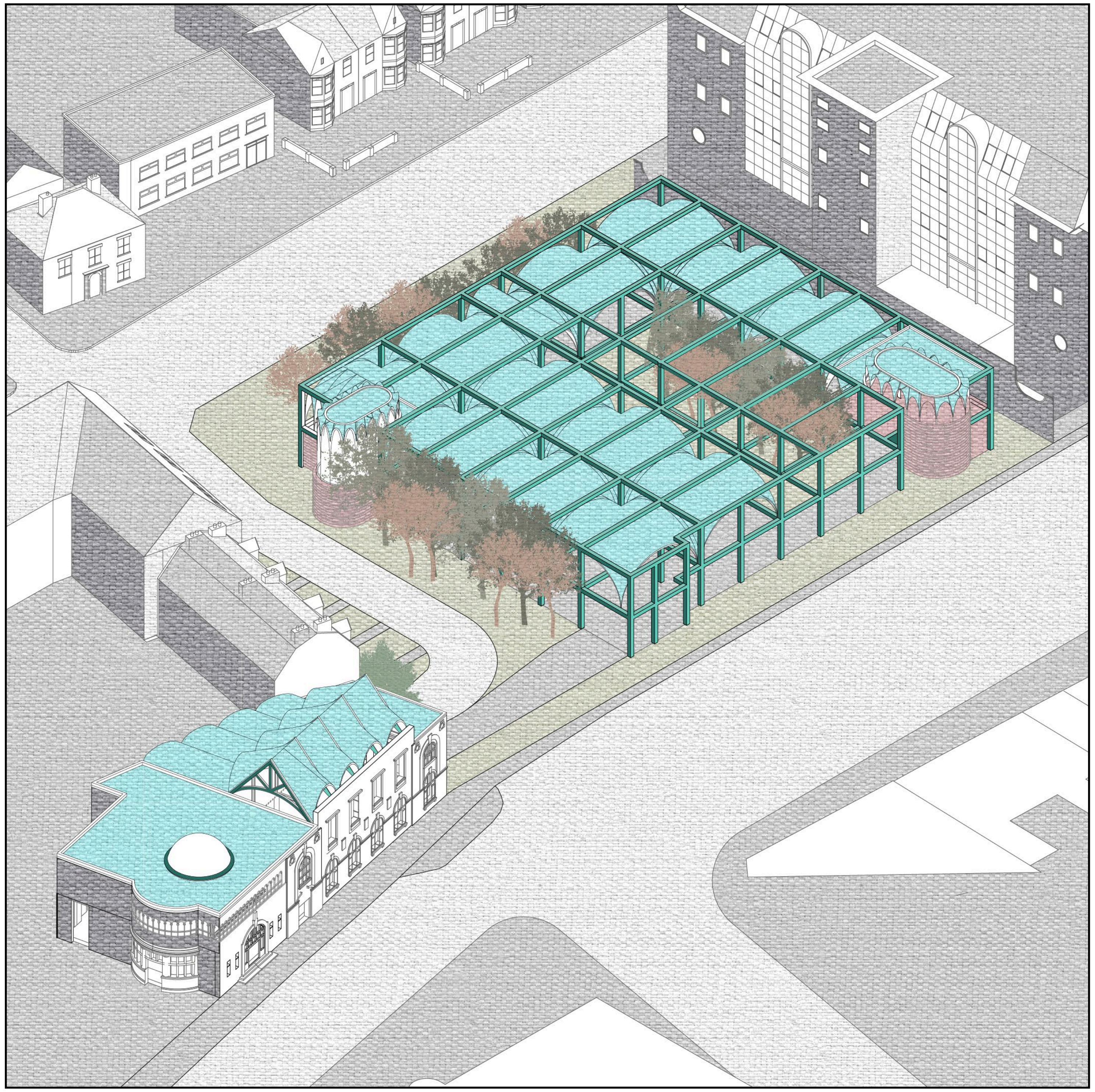
Central Library begins to be dismantled, aggregate is recycled*

*To construct the new Carnegie Roofs, the Central library’s truck access will be dismantled for concrete aggregate.



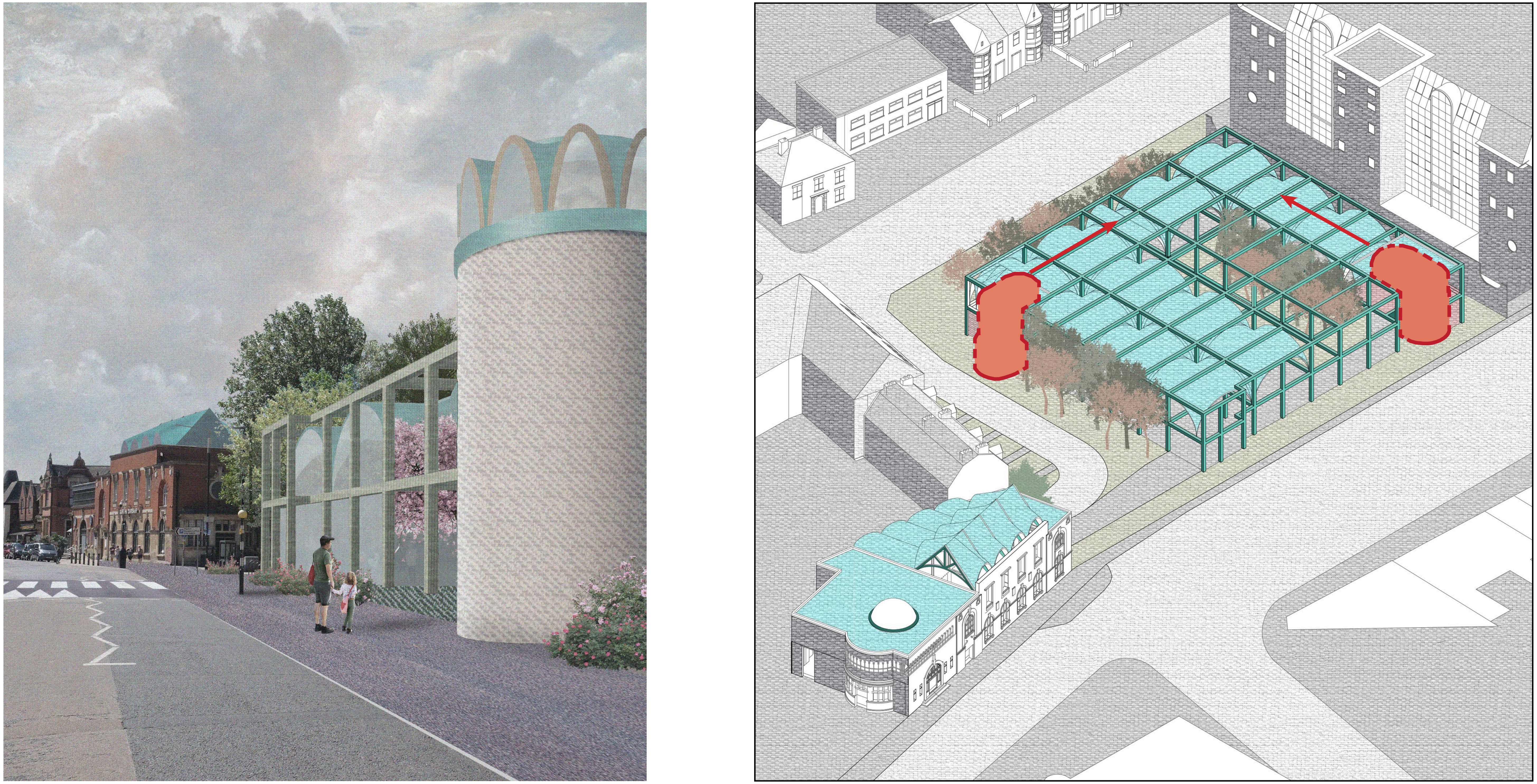
2024-2025: Phase 3
The two structures are complete





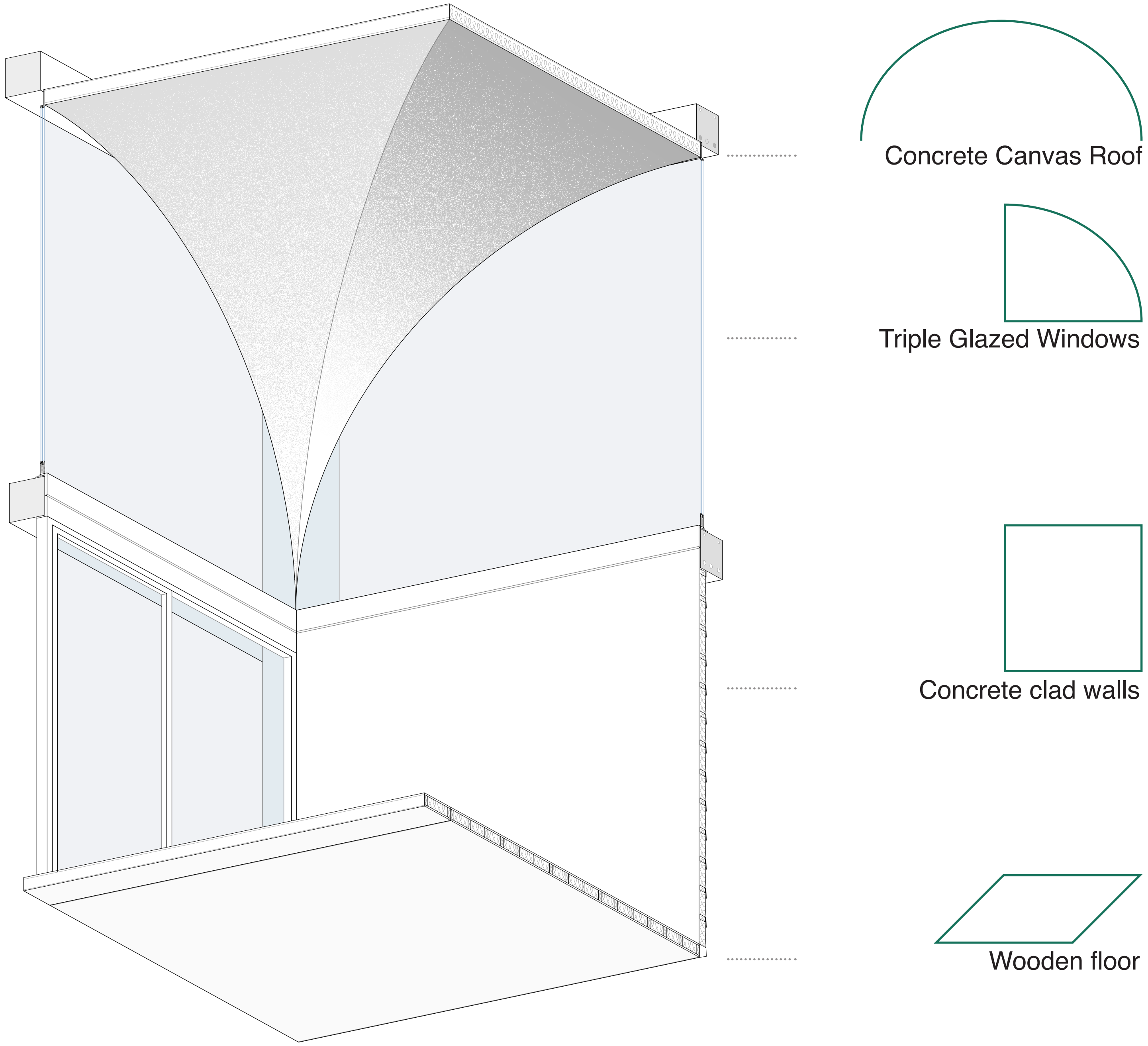
2025: Phase 4

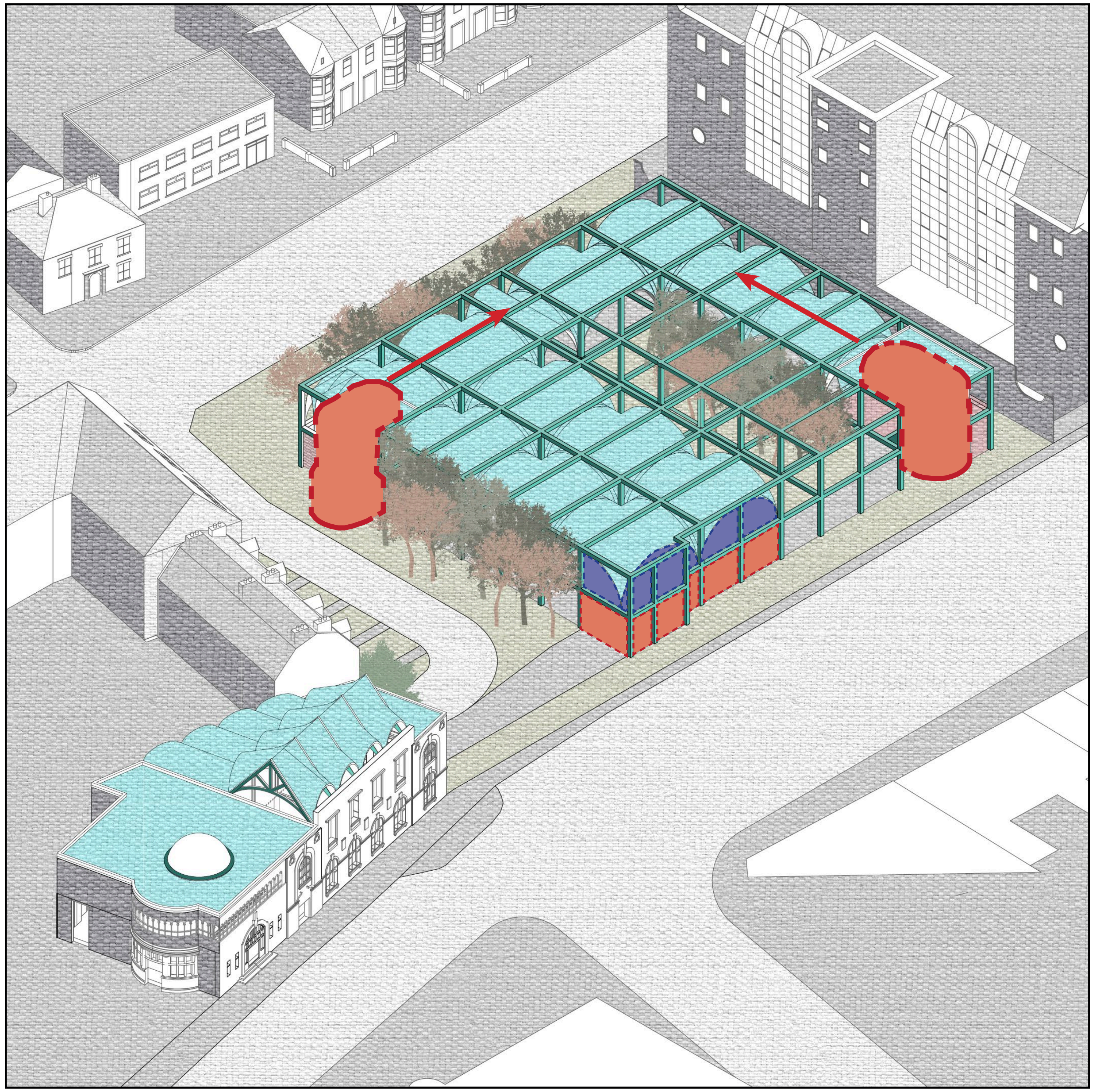
The two structures are woven together through a new park



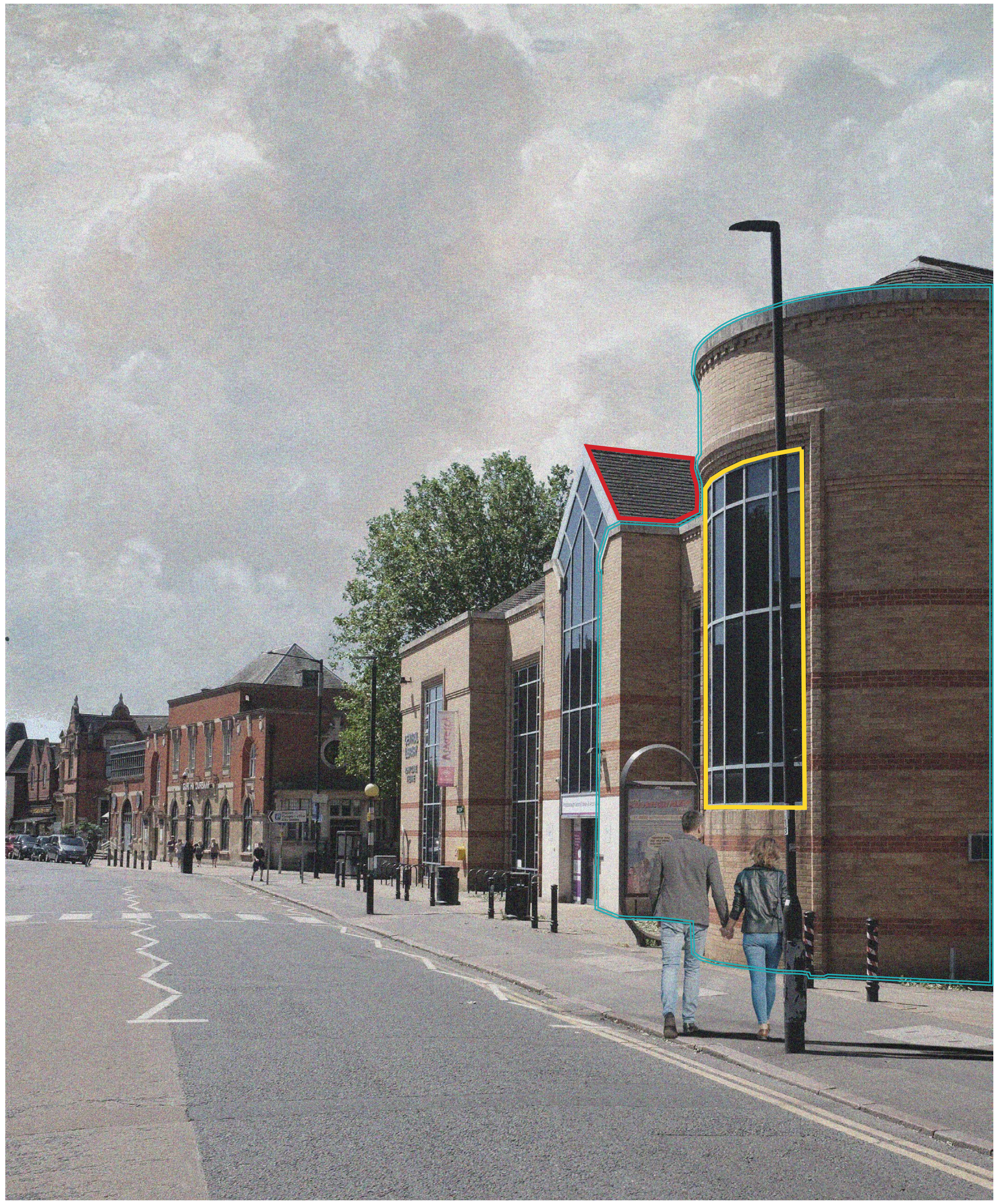
2025-∞- Phase 5

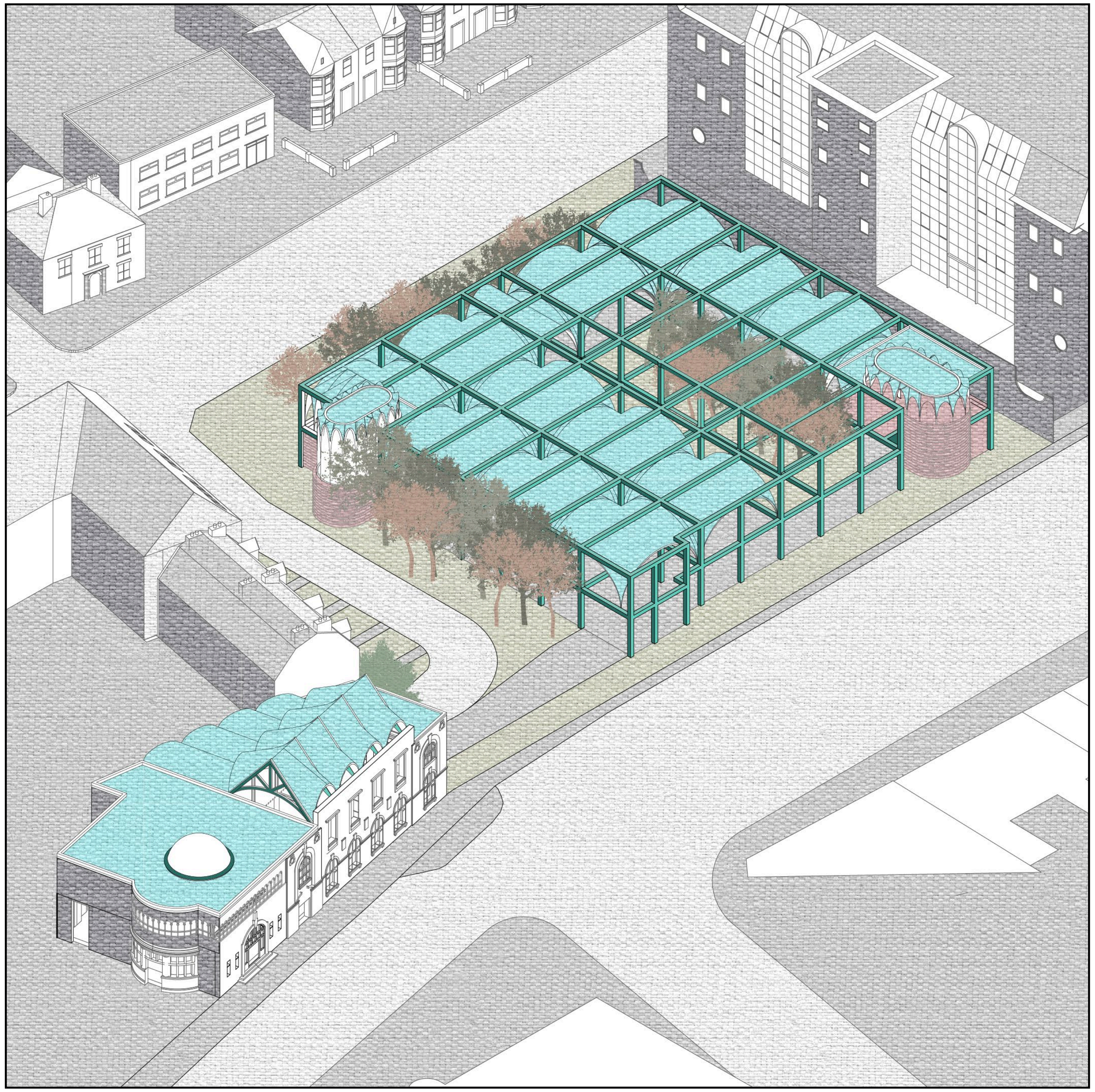
Central Library Building can be reclad when the library needs to expand





A modular kit of parts





Roofing- Slate 🟥

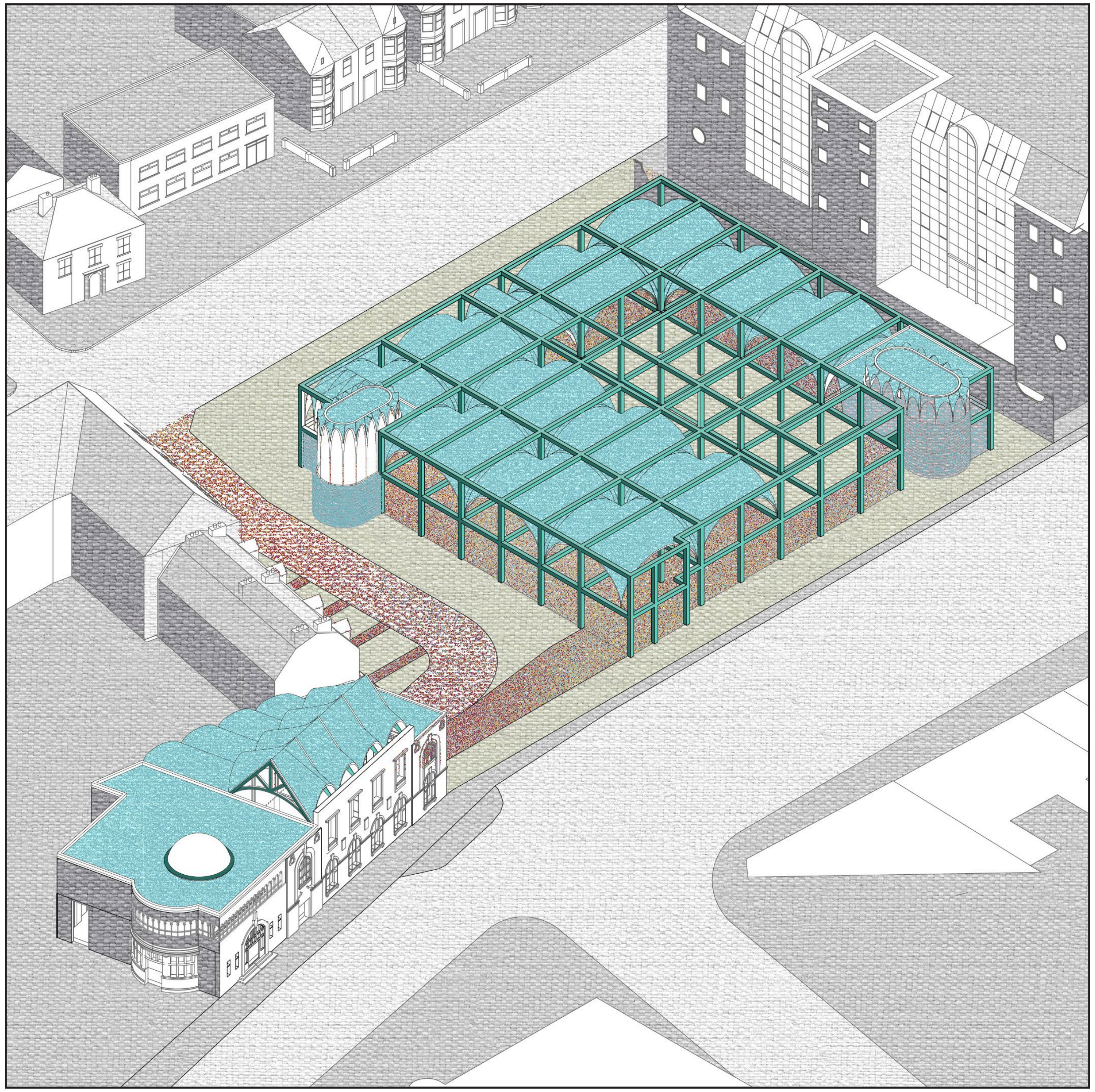
Cladding-Limestone brick 🟦

Glazing- Double glazed glass 🟨

Existing building

1m

Concrete Canvas used to create refugee shelter

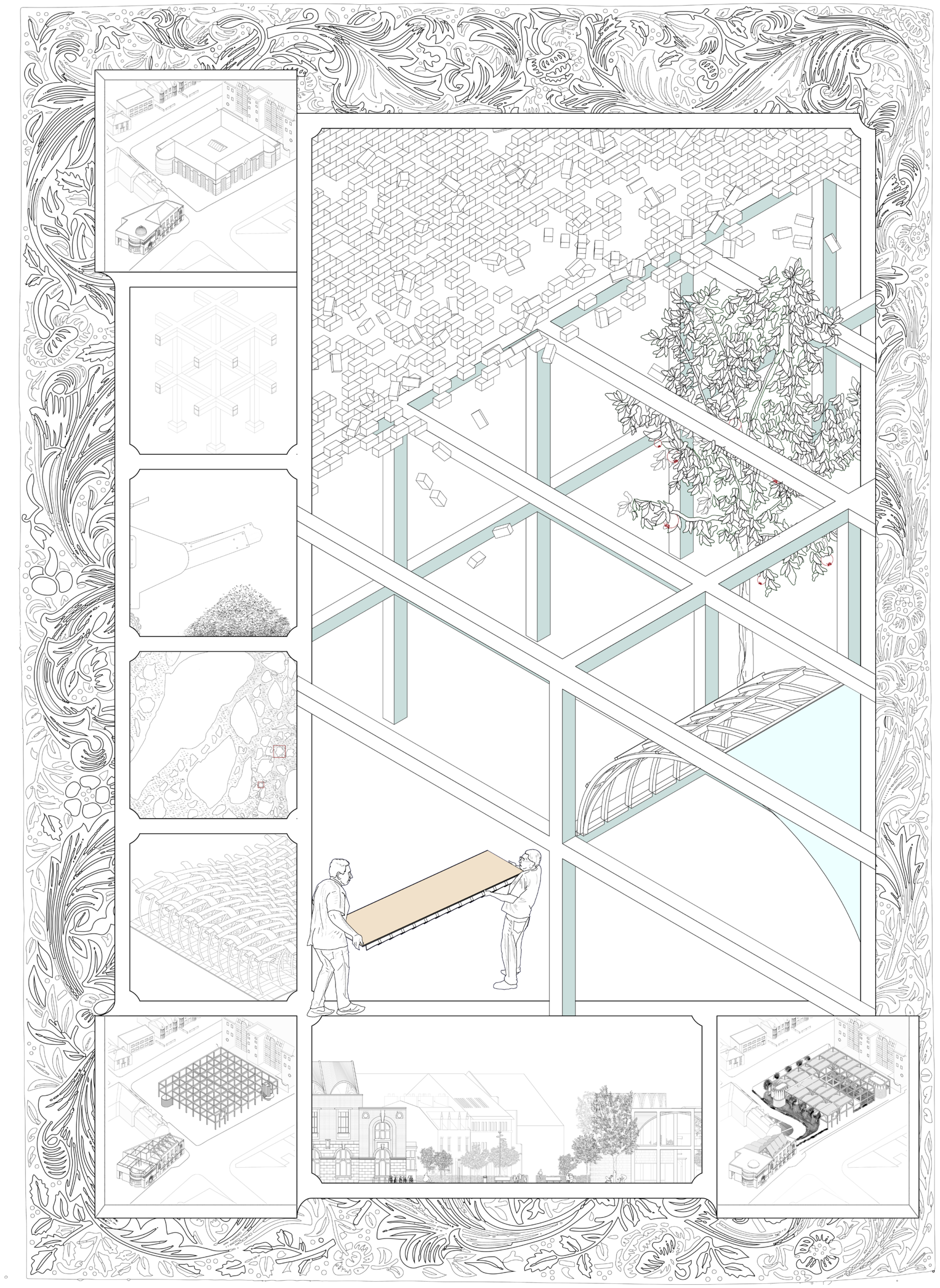


Roofing ◆

Cladding + Structure ◆

Glazing ◆

Recycled concrete components placed



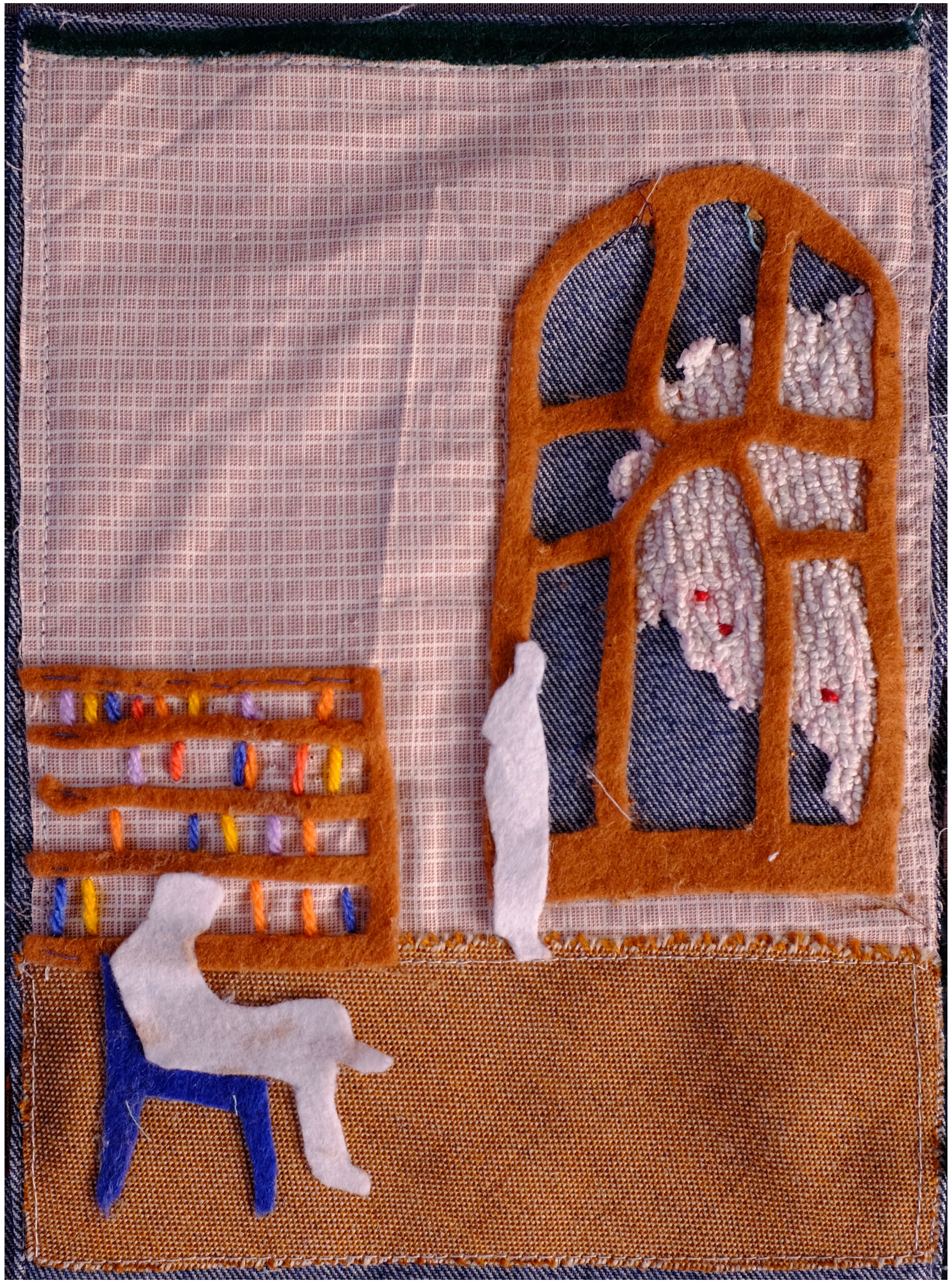
The old creates the new

Aristarchus Samius
Hipparchus Rhodius
Ptolemeus
Albateonius
Rex Alfonsus
N. Copernicus
Tycho Brahe
P. Lansbergius
Hinc omnia lustrat

PHILIPPI LANSBERGI
TABVLAE
MOTVVM COELESTI-
UM PERPETUÆ;
Ex omnium temporum
Obſervationibus conſtructæ,
temporumque omnium
Obſervationibus
conſentientes.
ITEM
*Novæ & genuinæ Motuum cæleſ-
tium* THEORICÆ.
&
Aſtronomicarum obſervationum
THESAVRUS.

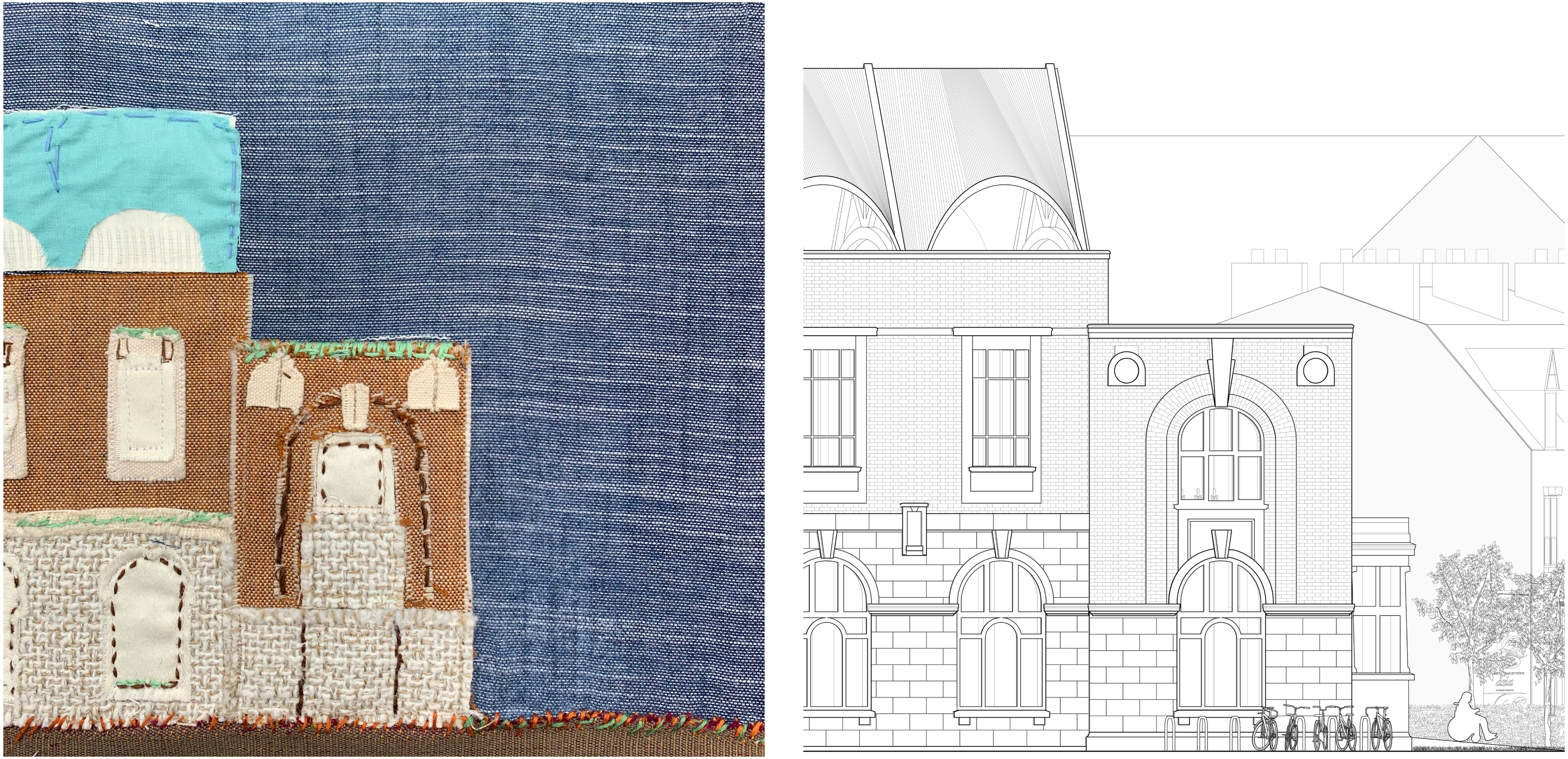
MIDDELBURGI ZELANDIÆ,
Apud
ZACHARIAM ROMANUM.
M. DC. XXXII.

Miniature 7: The old and the New
Source: The Harmonia Macrocosmica
Andreas Cellarius
1632



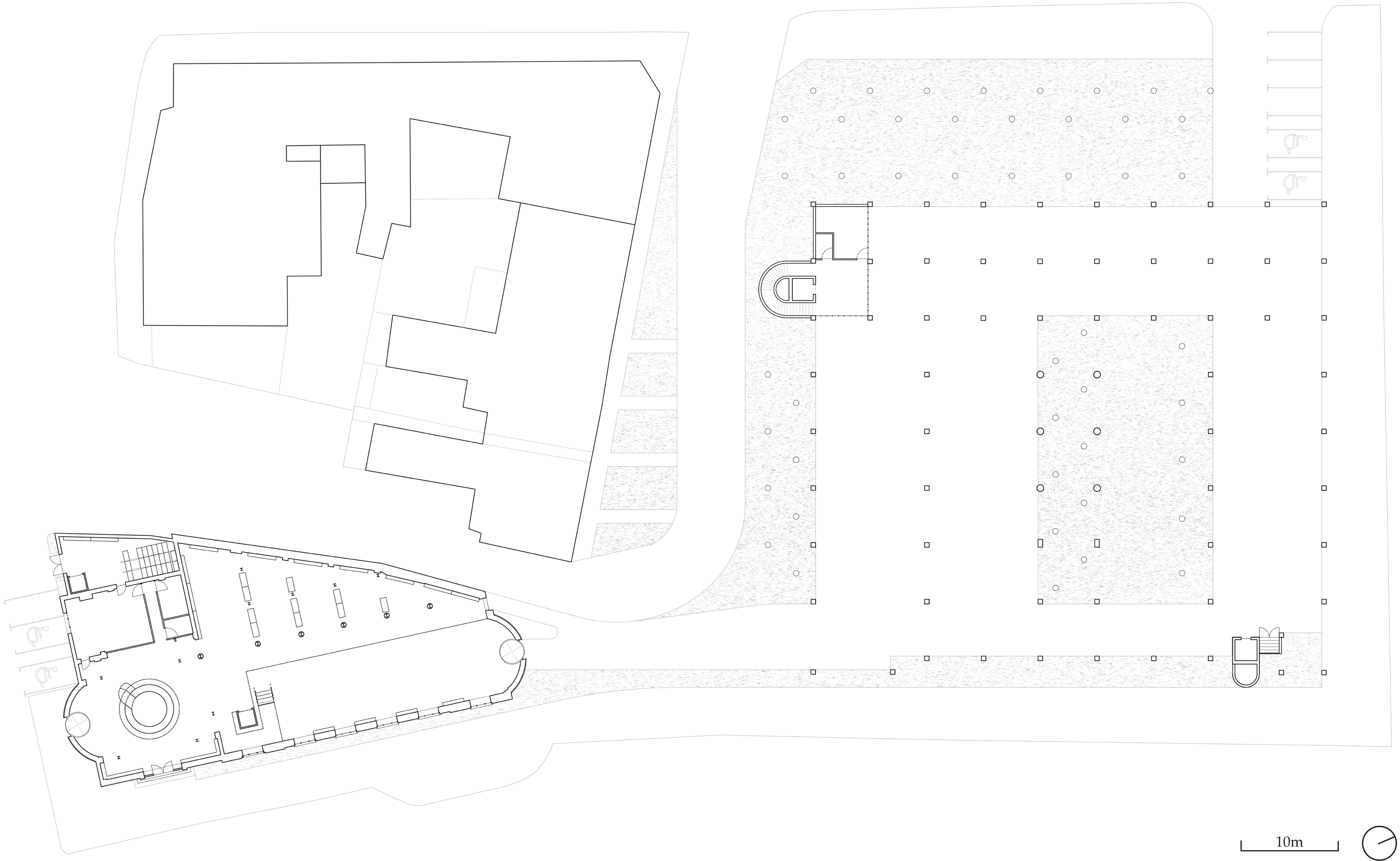
Phase 1- Carnegie 2022

Phase 1



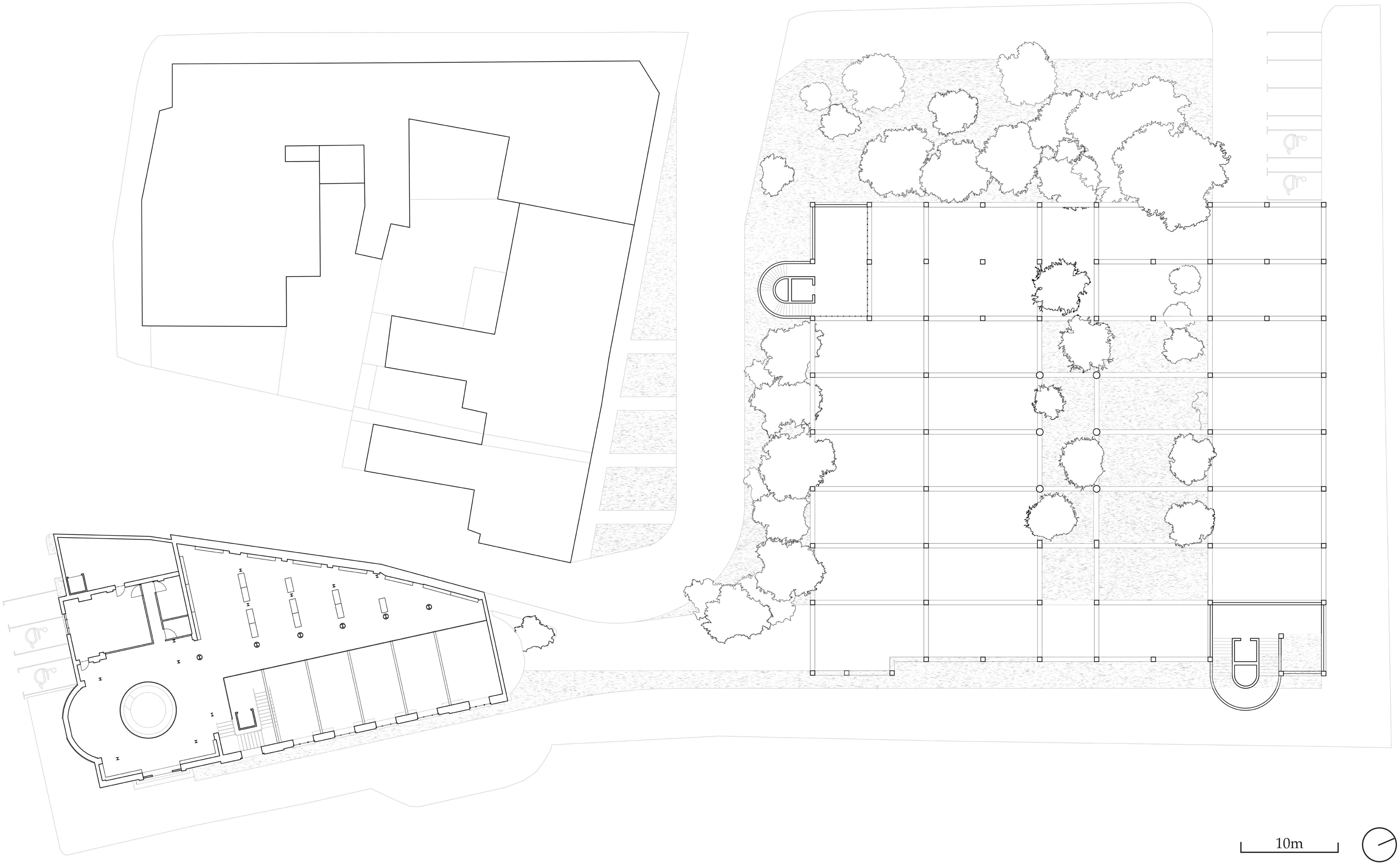
A patchwork Palimpsest

Phase 1



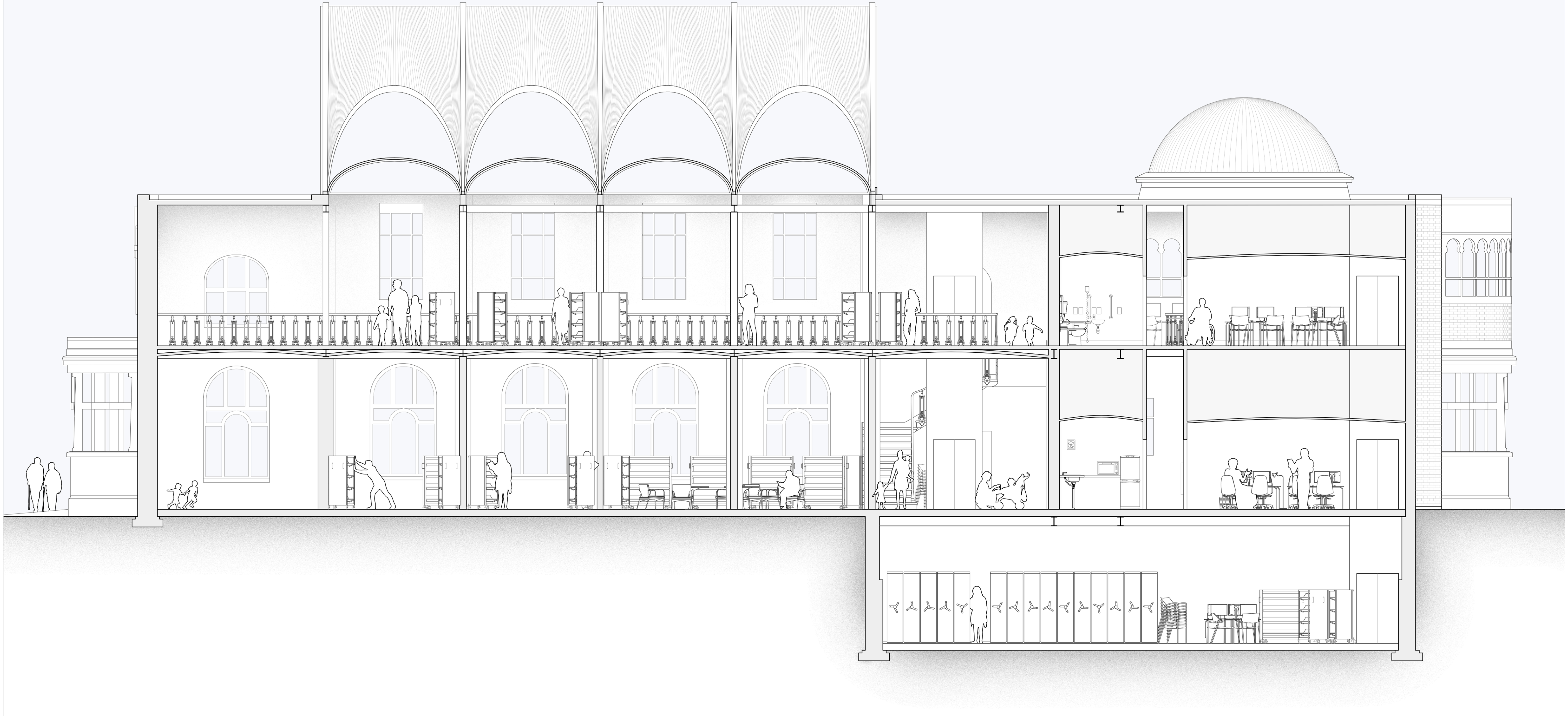
Proposal Plan- Ground Floor

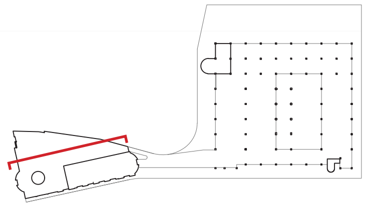
Phase 1



Proposal Plan- First Floor

Phase 1

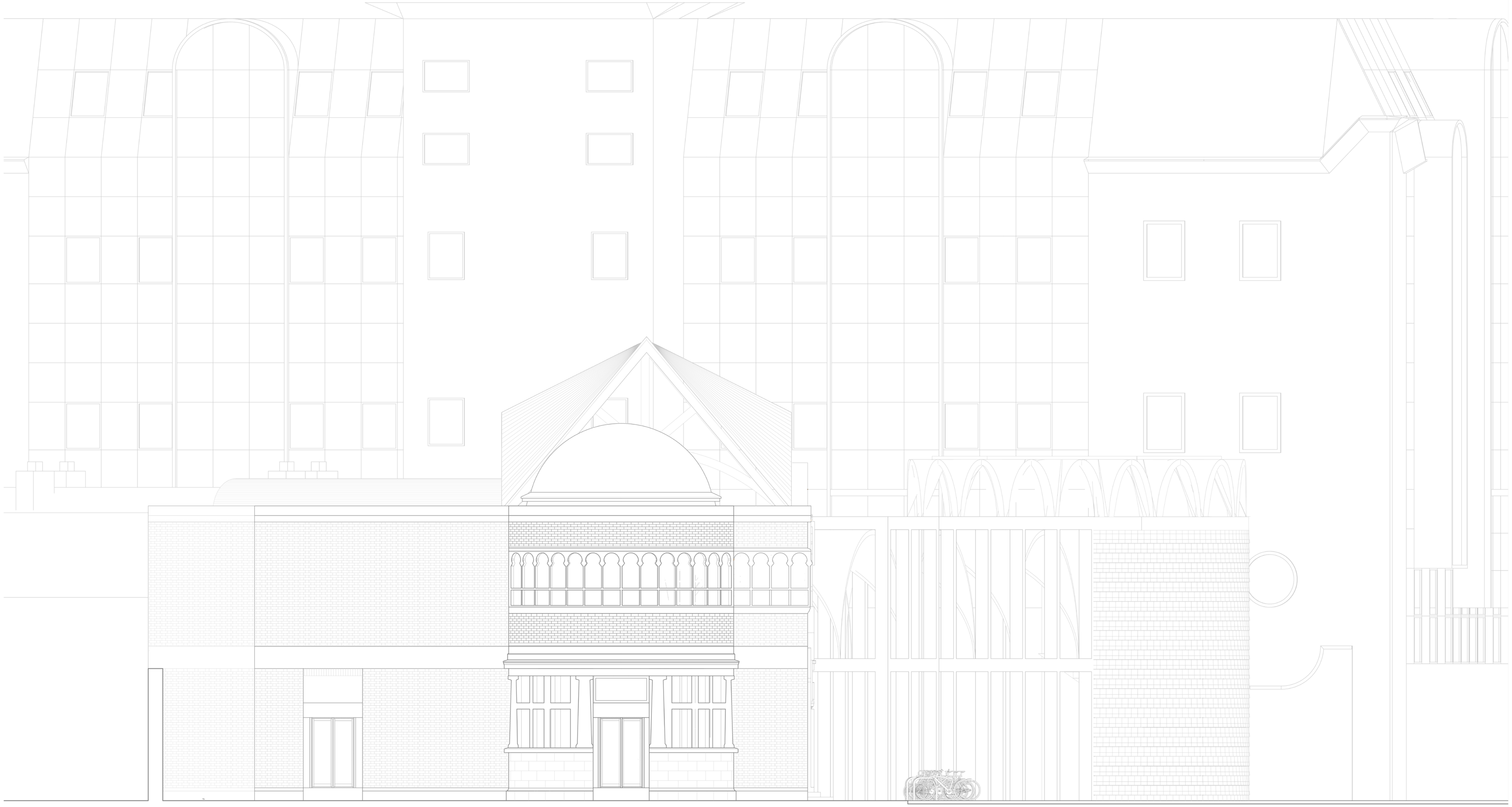




Carnegie N-S Section

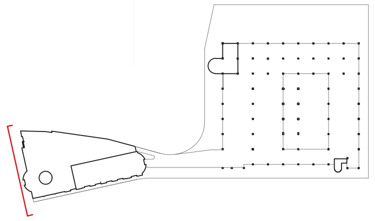
Function and roofing

Phase 1

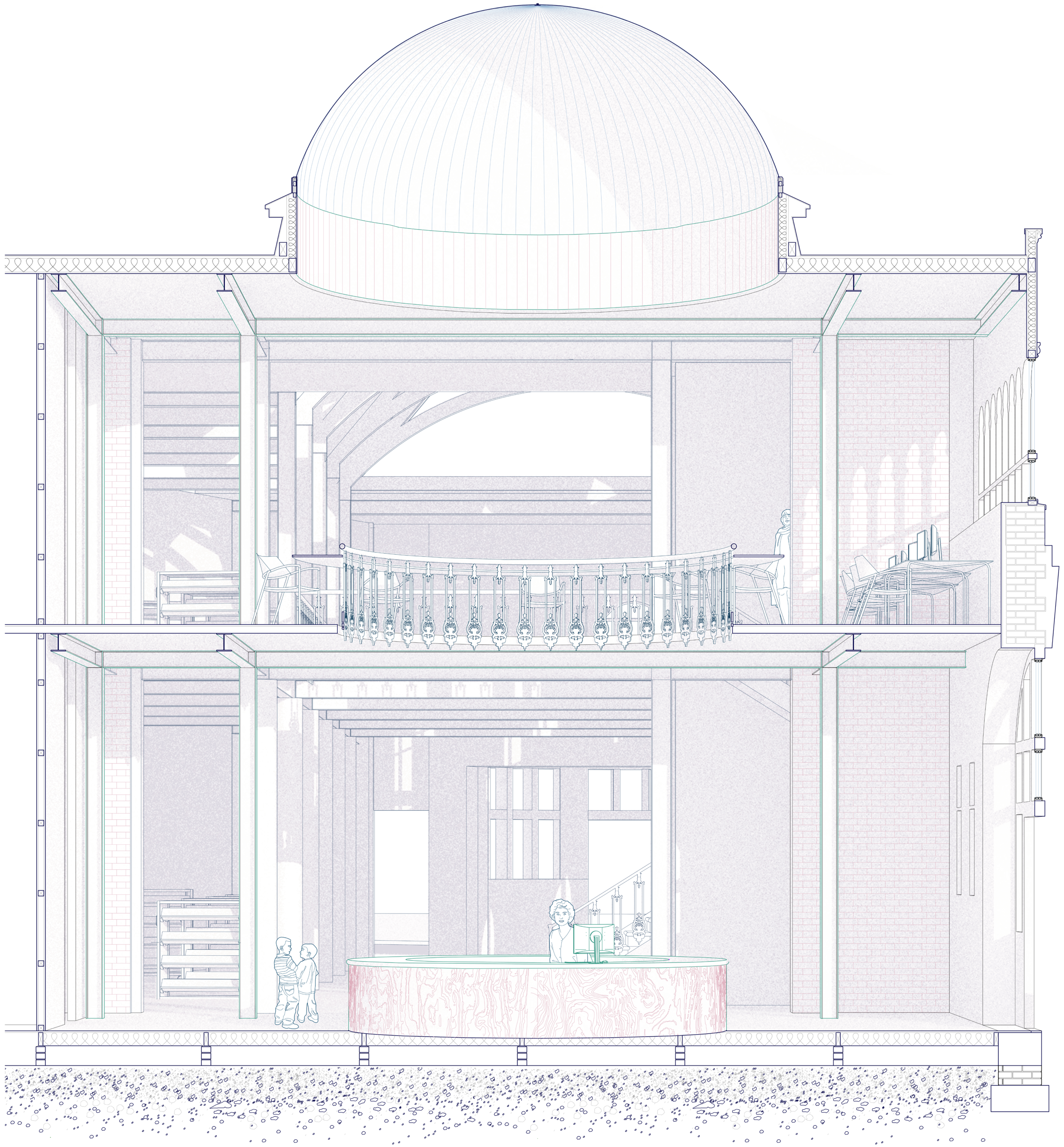


Carnegie Southern Elevation

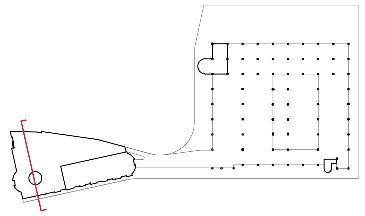
Entering the library

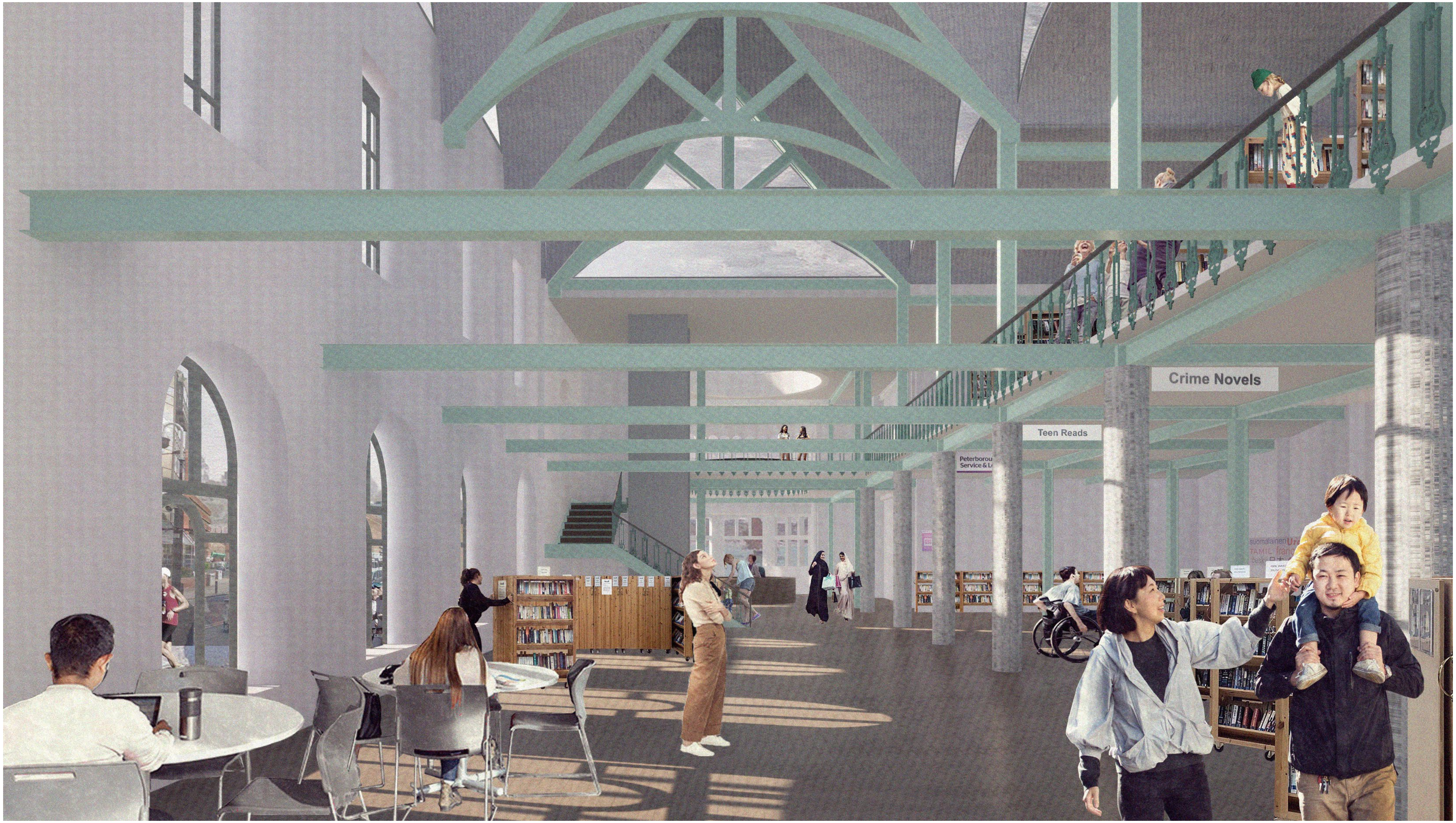


Phase 1

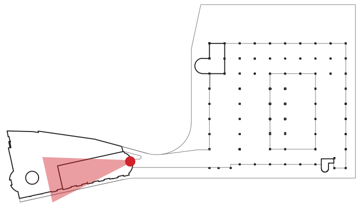


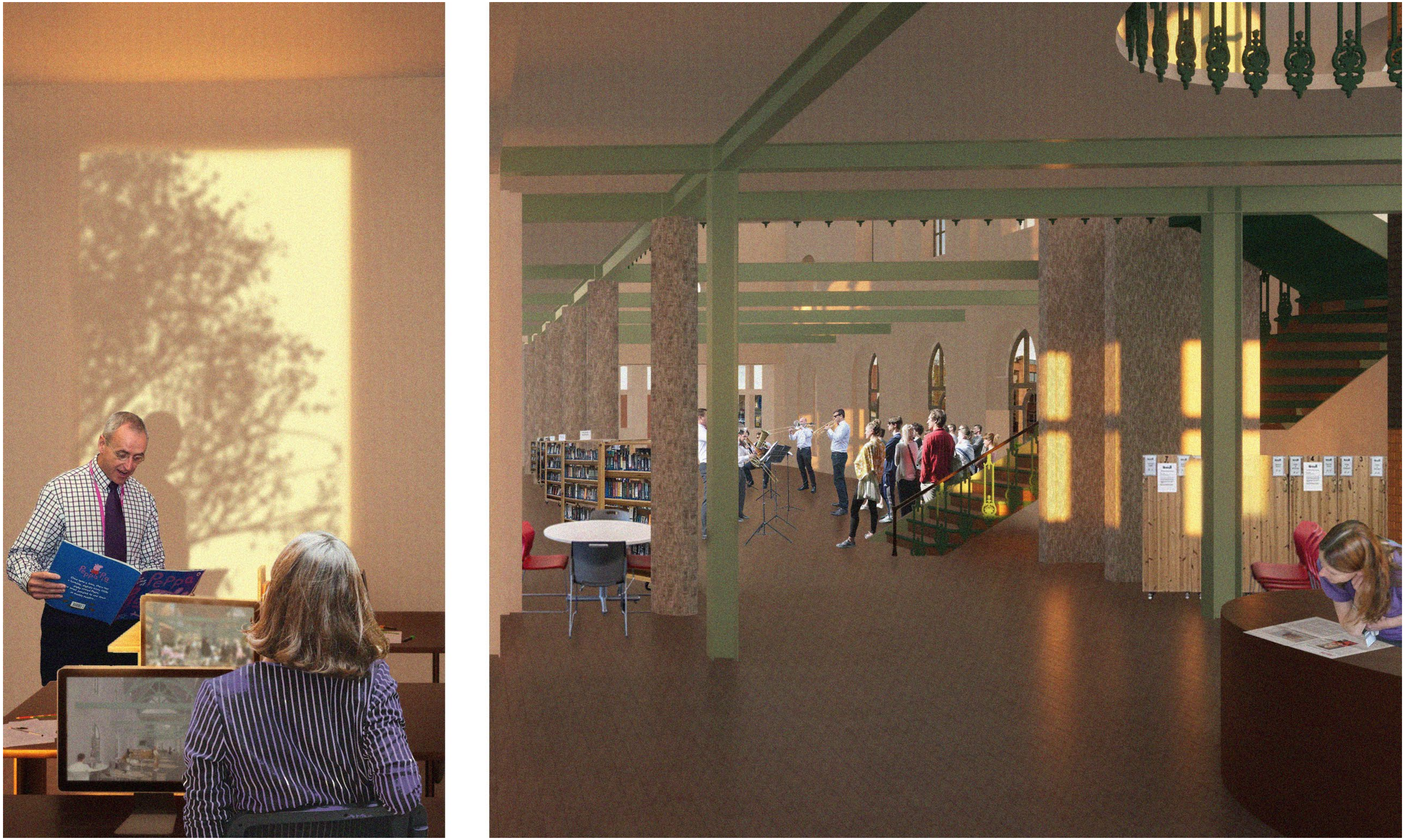
Carnegie Perspective Section A



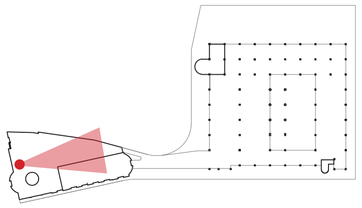


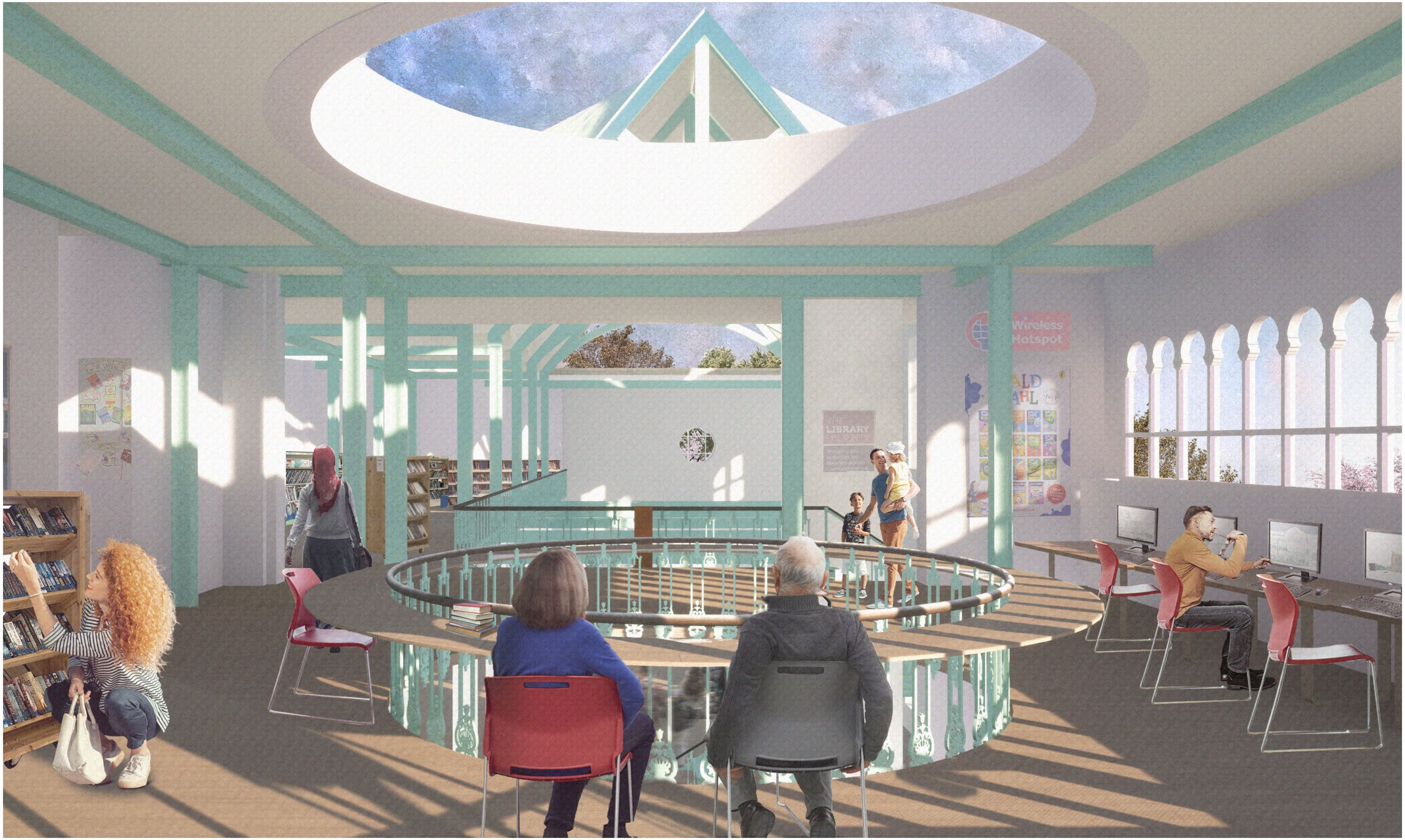
A breadth of knowledge



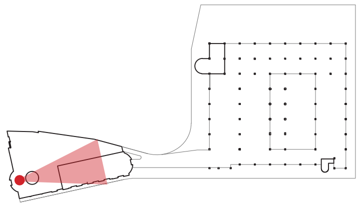


Collage through offices and entrances



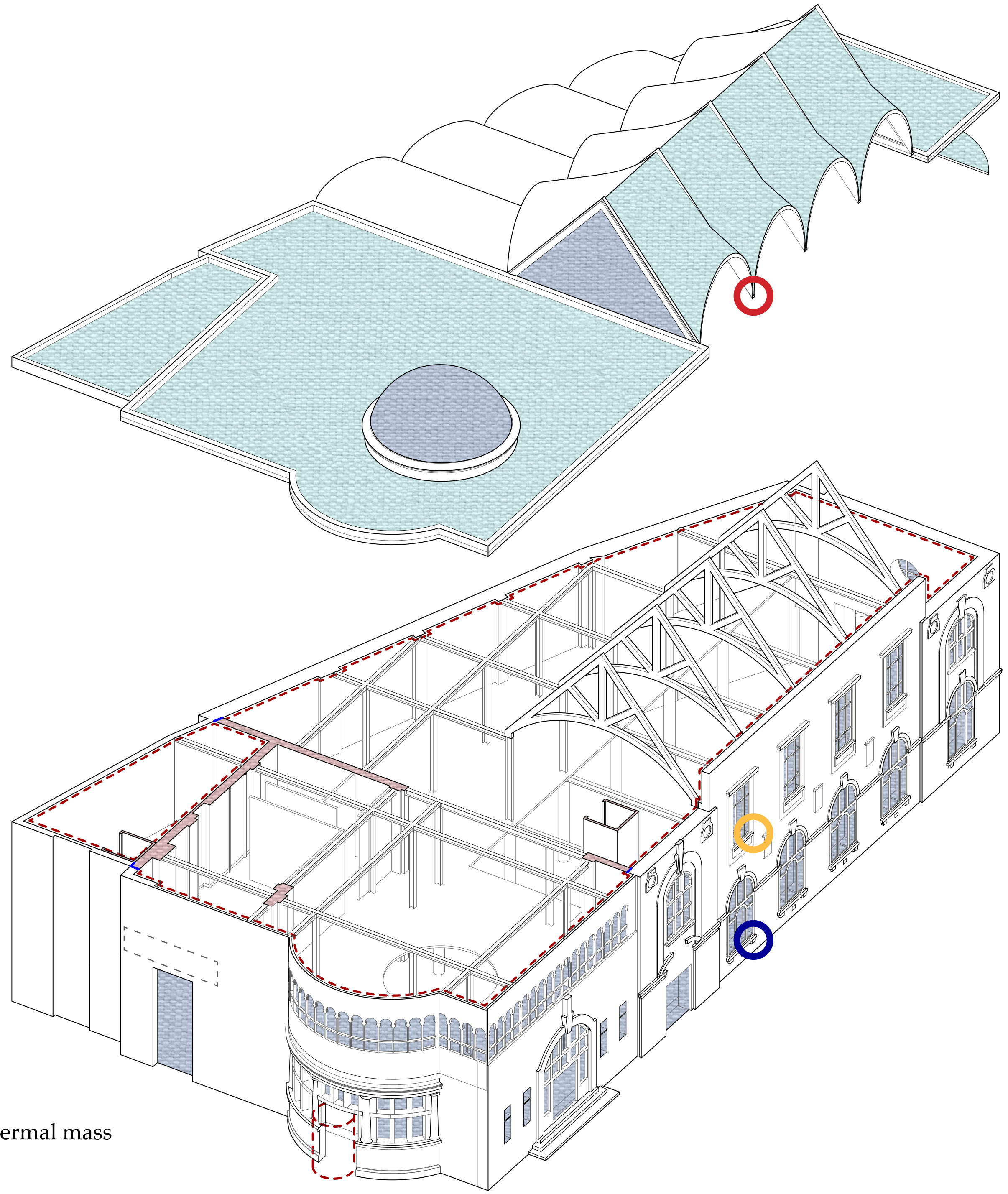


Collage of first floor



Phase 1

Historic England, 2014



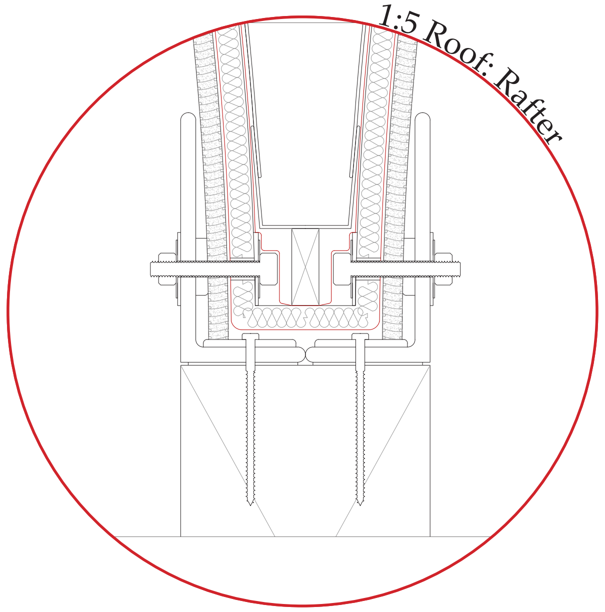
🟥 Interior thermal mass

🟦 Triple-glazed components

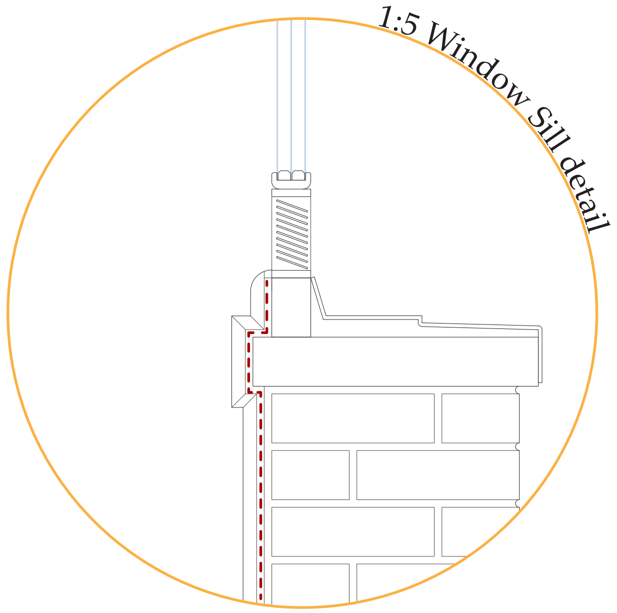
🟩 Coloured flexible PV cells

⋰ Microfoil Insulation sleeve

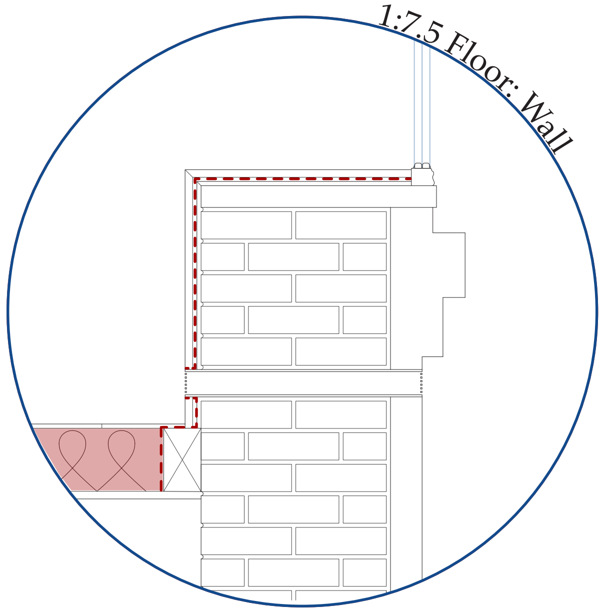
╱ Implanted thermal breaks



1:5 Roof: Rafter



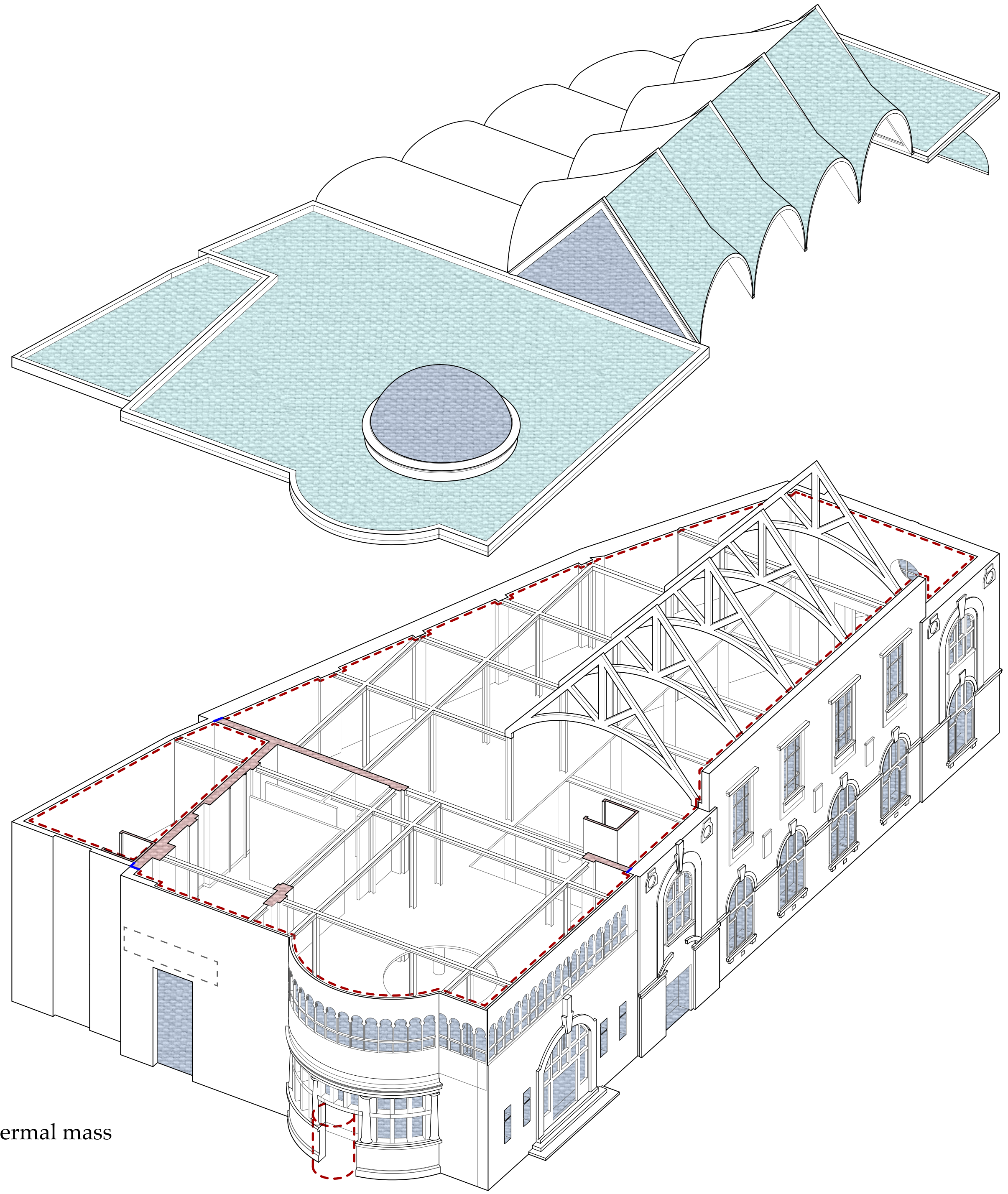
1:5 Window Sill detail



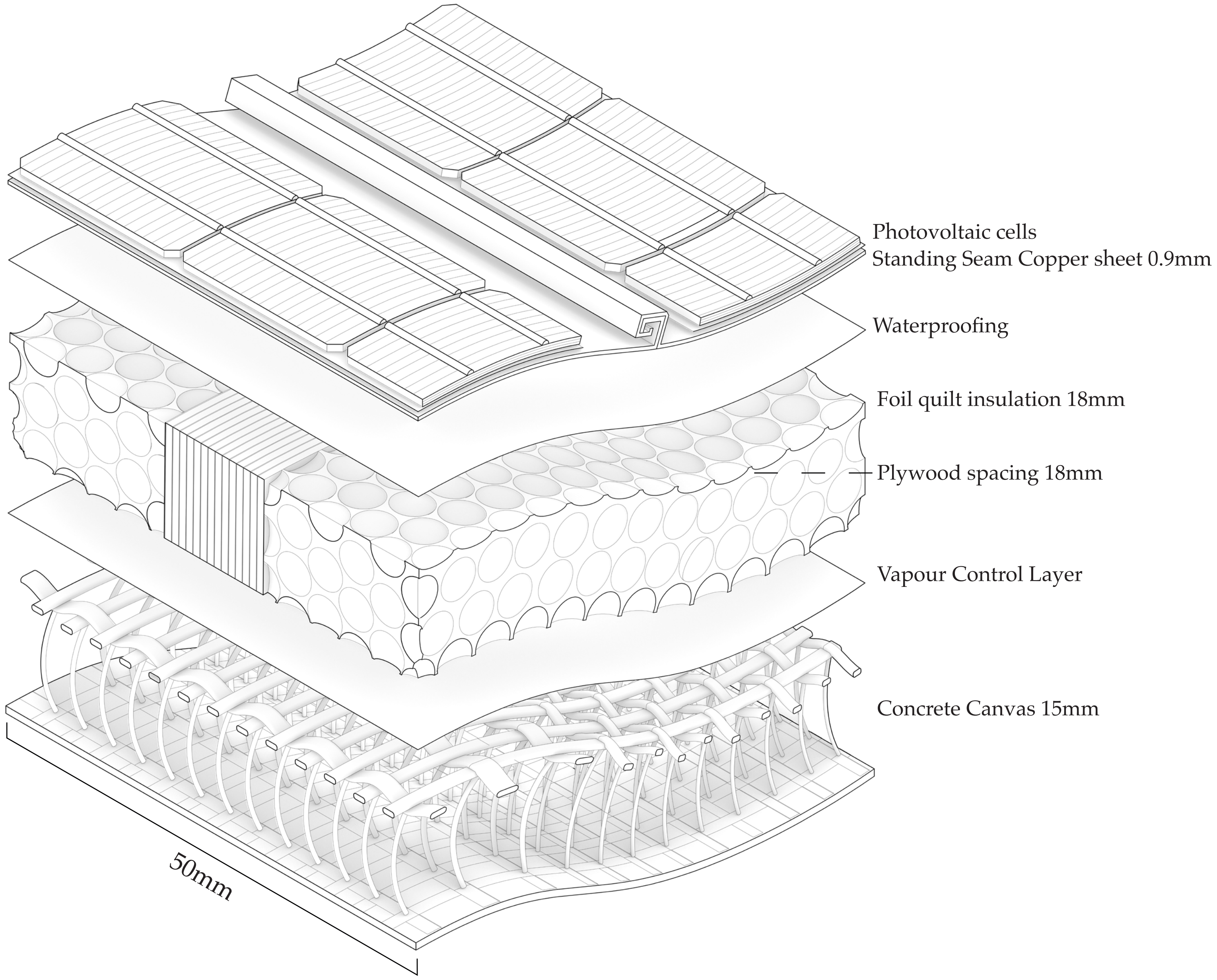
1:7.5 Floor: Wall

Enveloping the existing masonry

Phase 1



- 🟥 Interior thermal mass
- 🟦 Triple-glazed components
- 🟩 Coloured flexible PV cells
- ╱ Microfoil Insulation sleeve
- ╱ Implanted thermal breaks

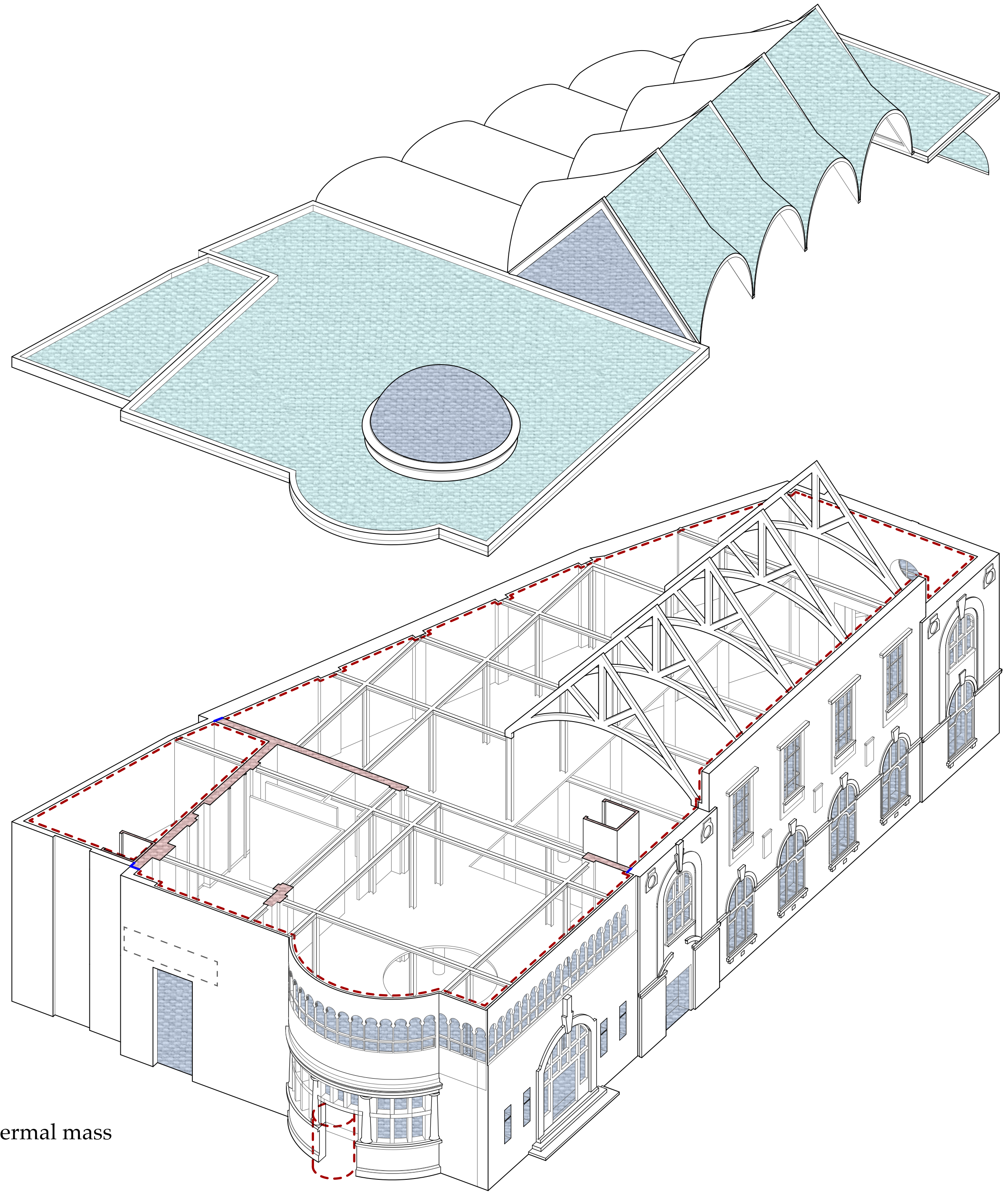


Roofing and insulation composition

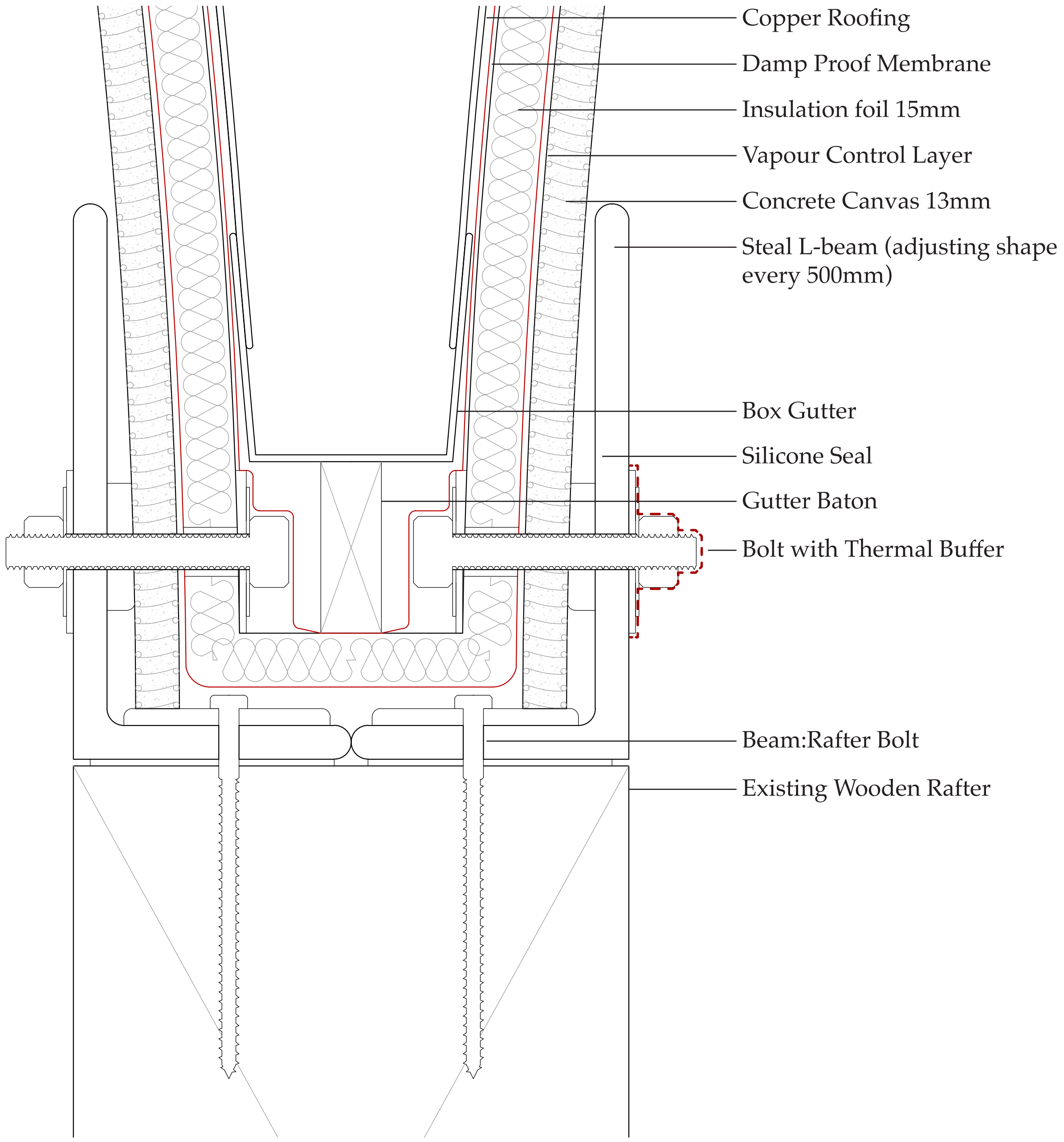
Detail of Roof composition

Phase 1

Sharei Et al, 2017



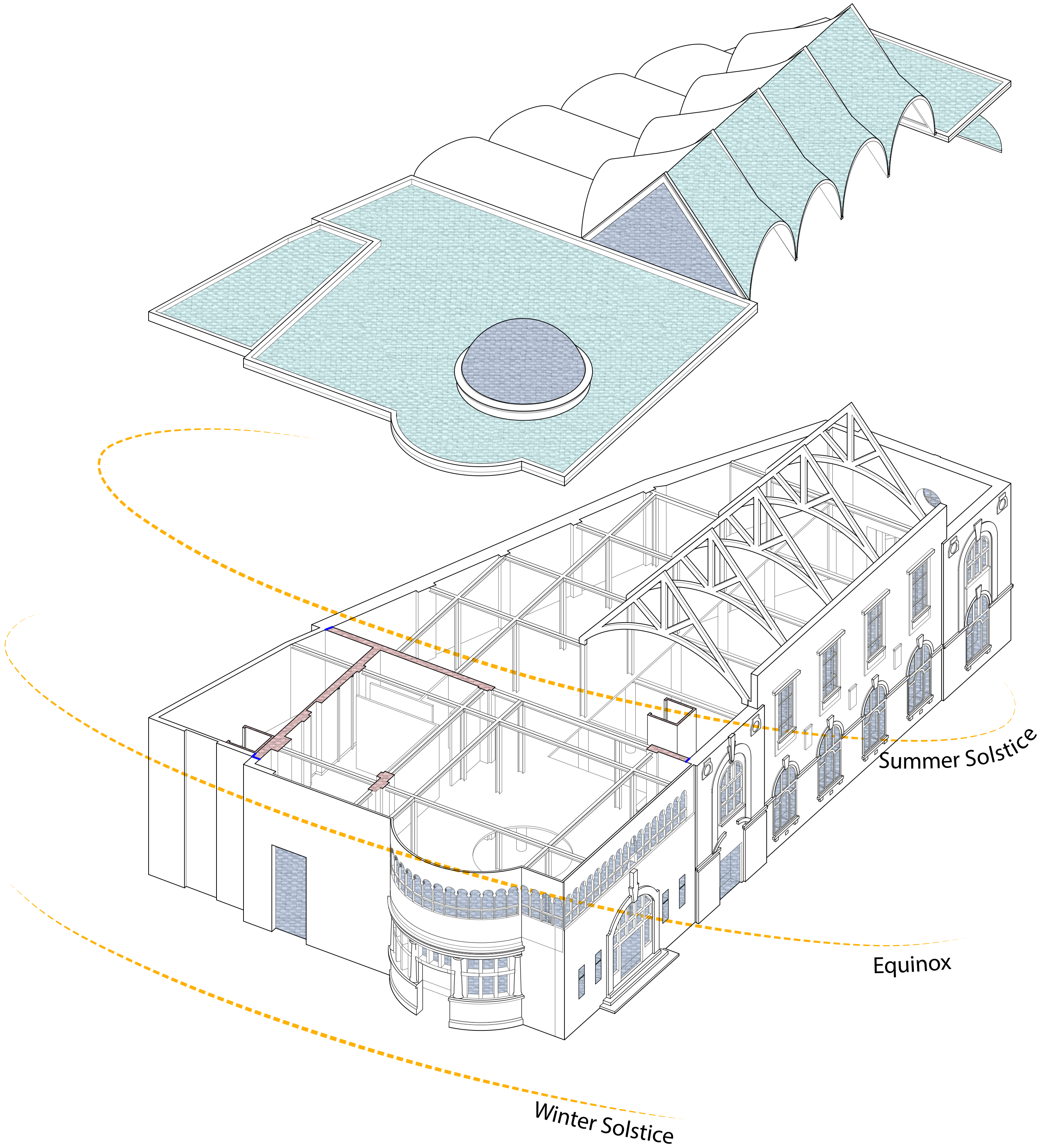
- 🟥 Interior thermal mass
- 🟦 Triple-glazed components
- 🟩 Coloured flexible PV cells
- ╱ Microfoil Insulation sleeve
- ╱ Implanted thermal breaks

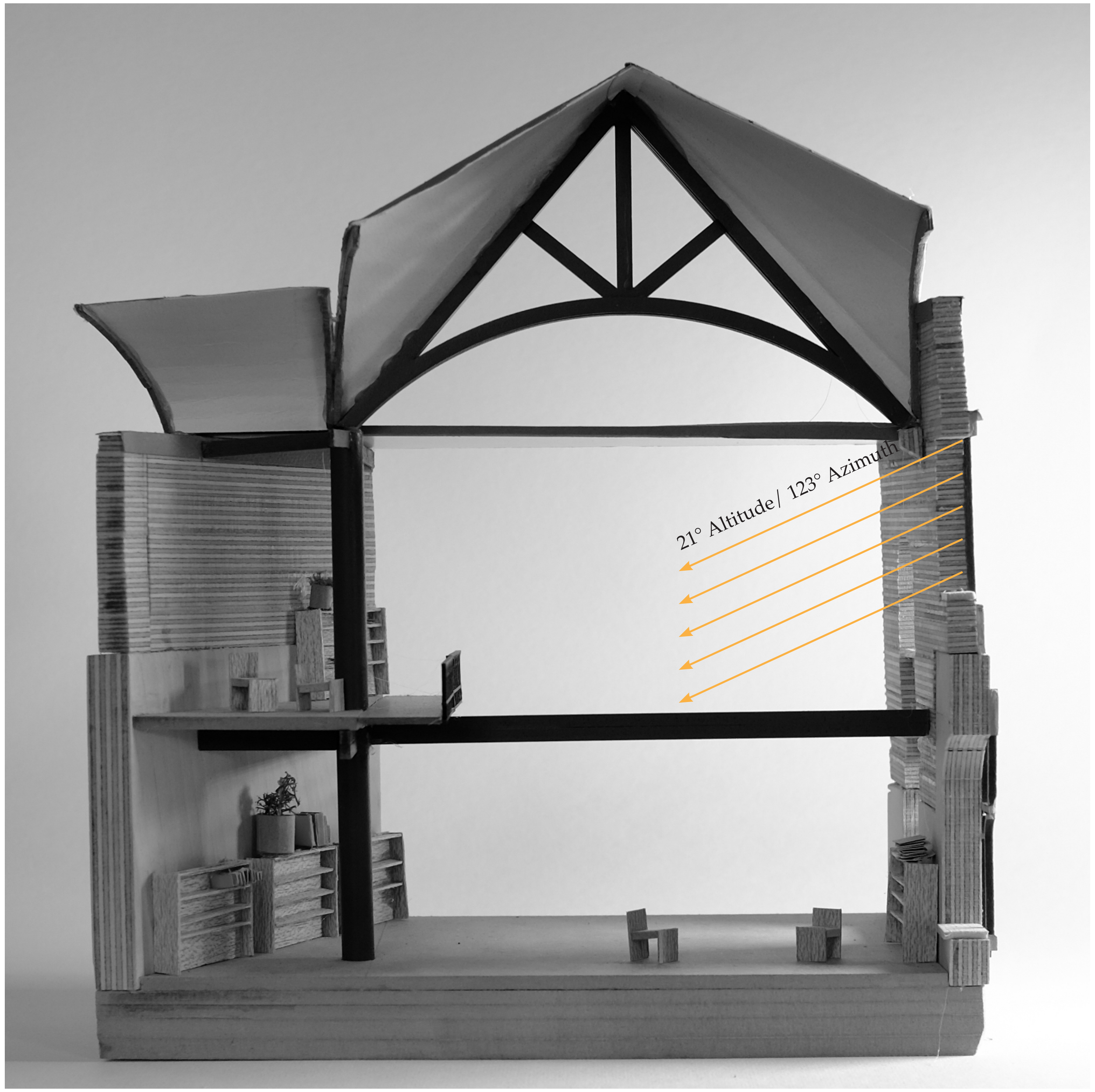


Roof:Rafter Joint, 1:2

Roofing and insulation composition

Phase 1

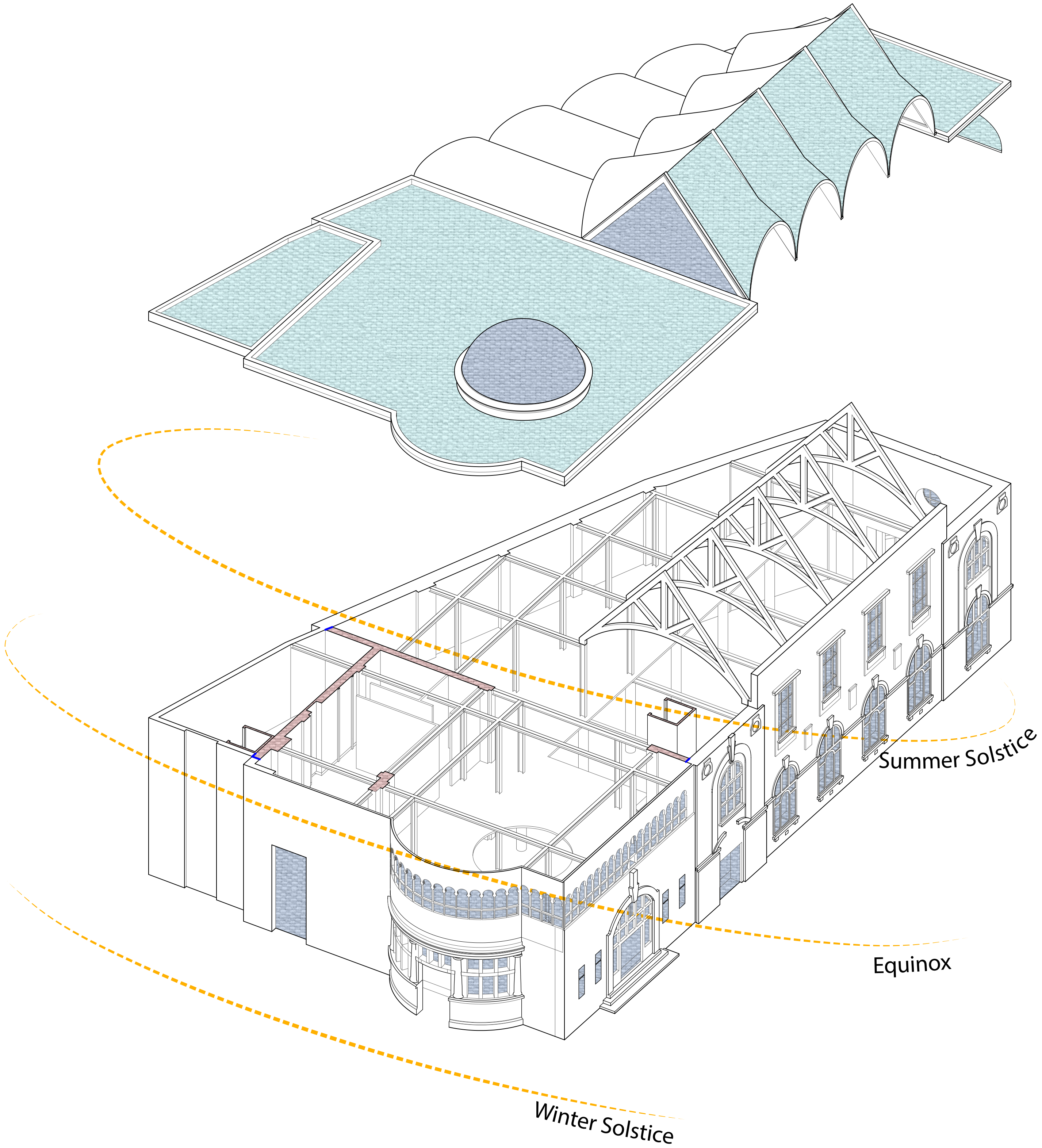


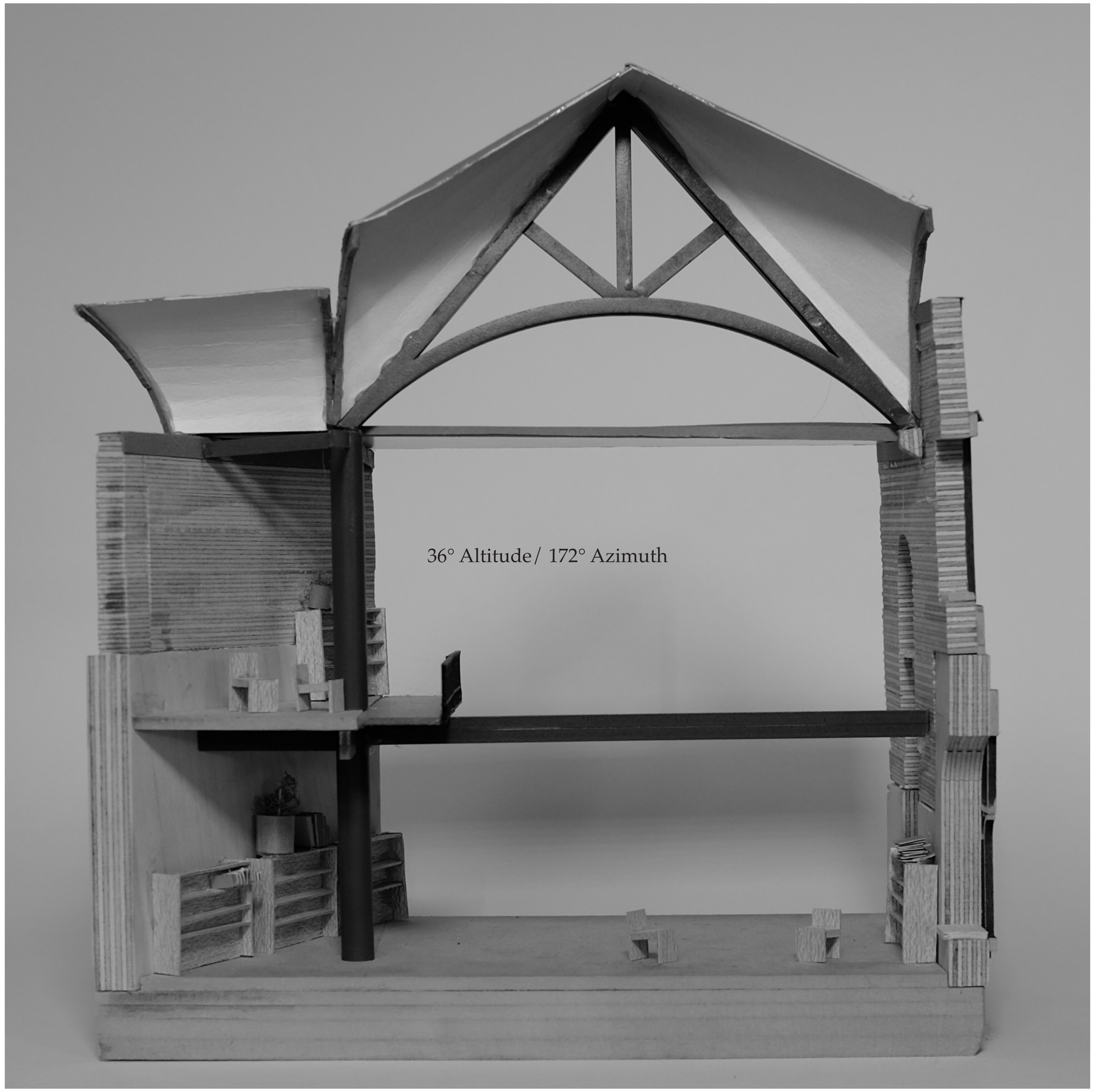


9am, March Equinox

Reading by sunlight

Phase 1

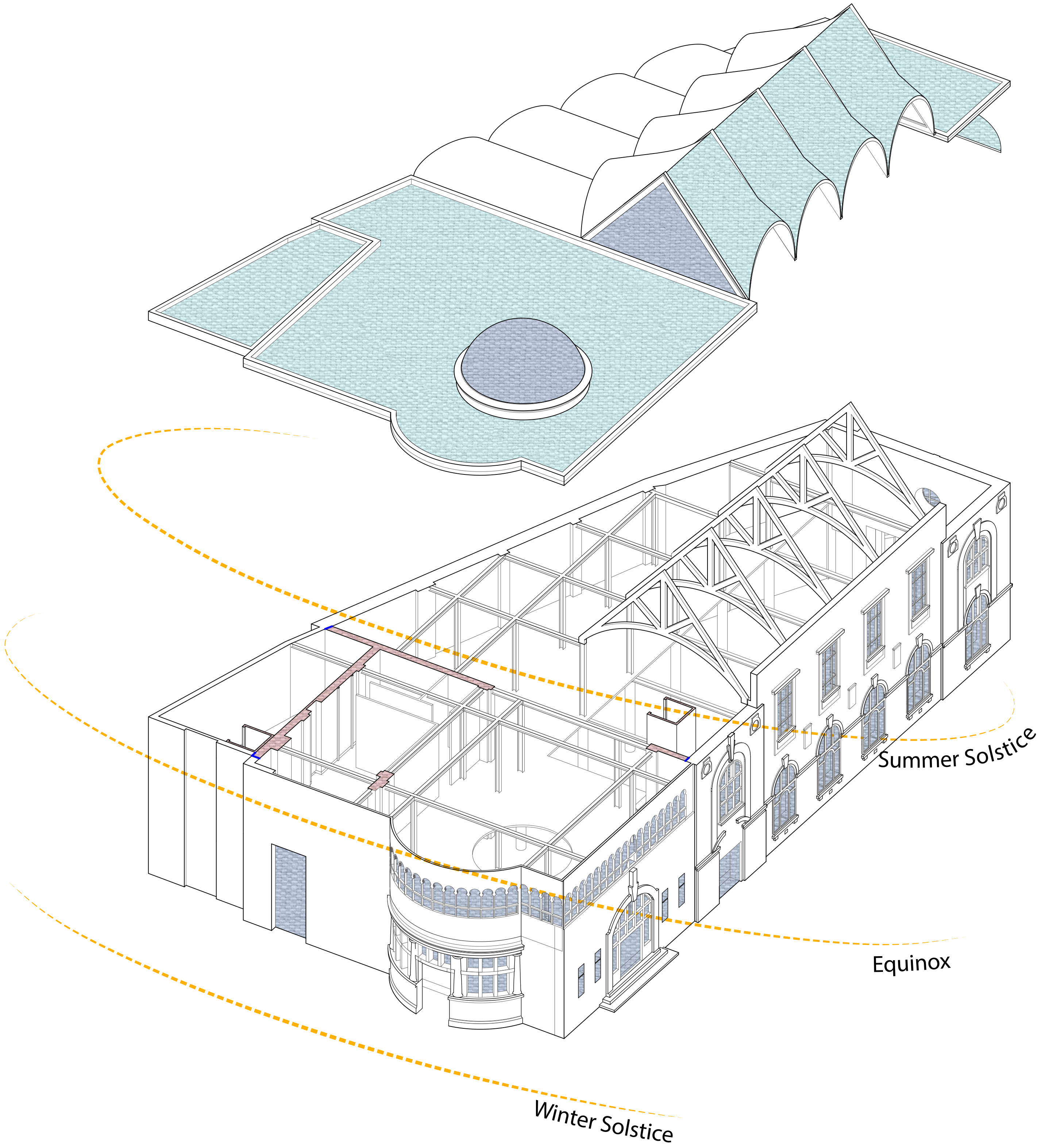


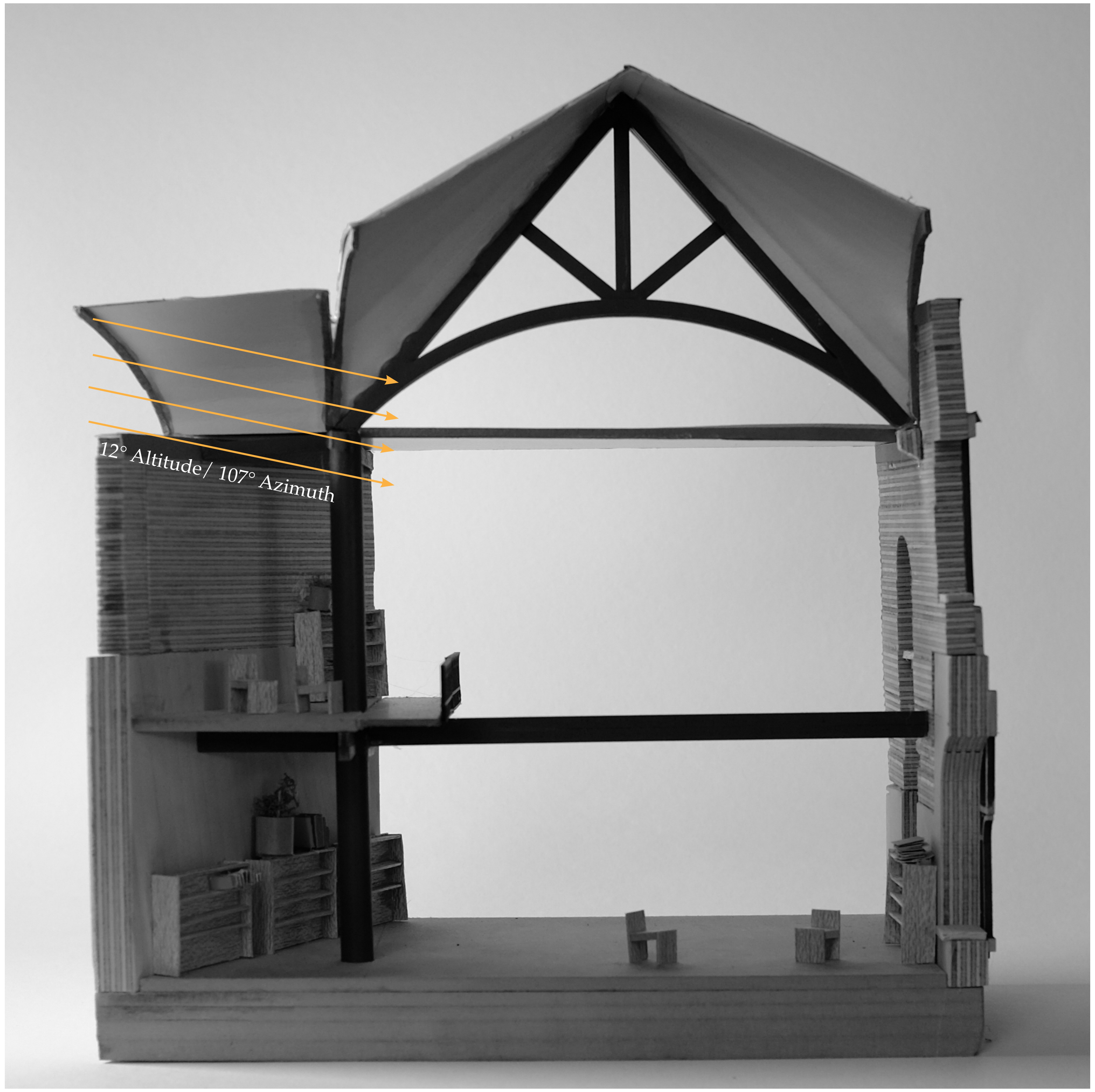


Midday, March Equinox

Reading by sunlight

Phase 1

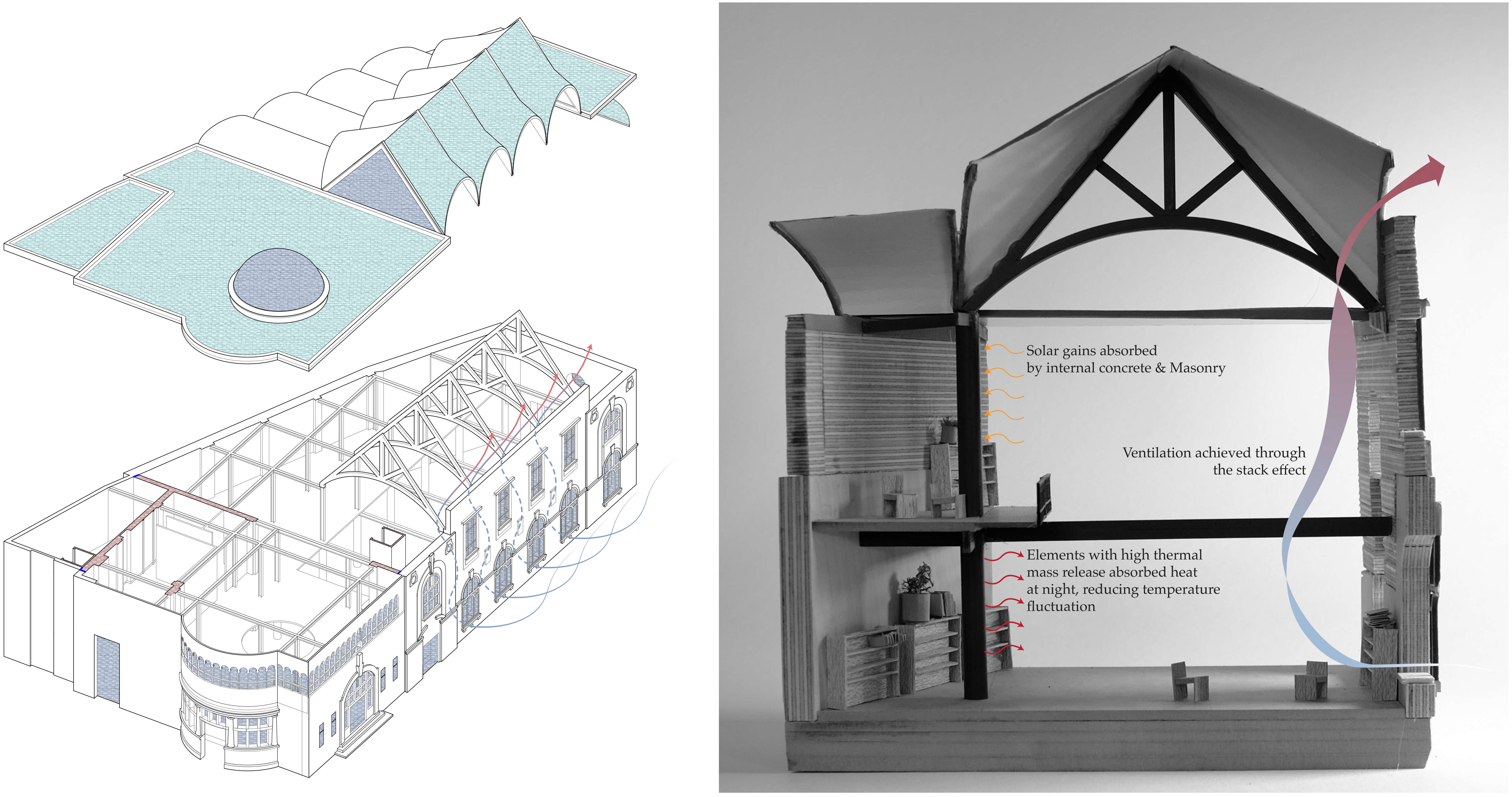




5pm, March Equinox

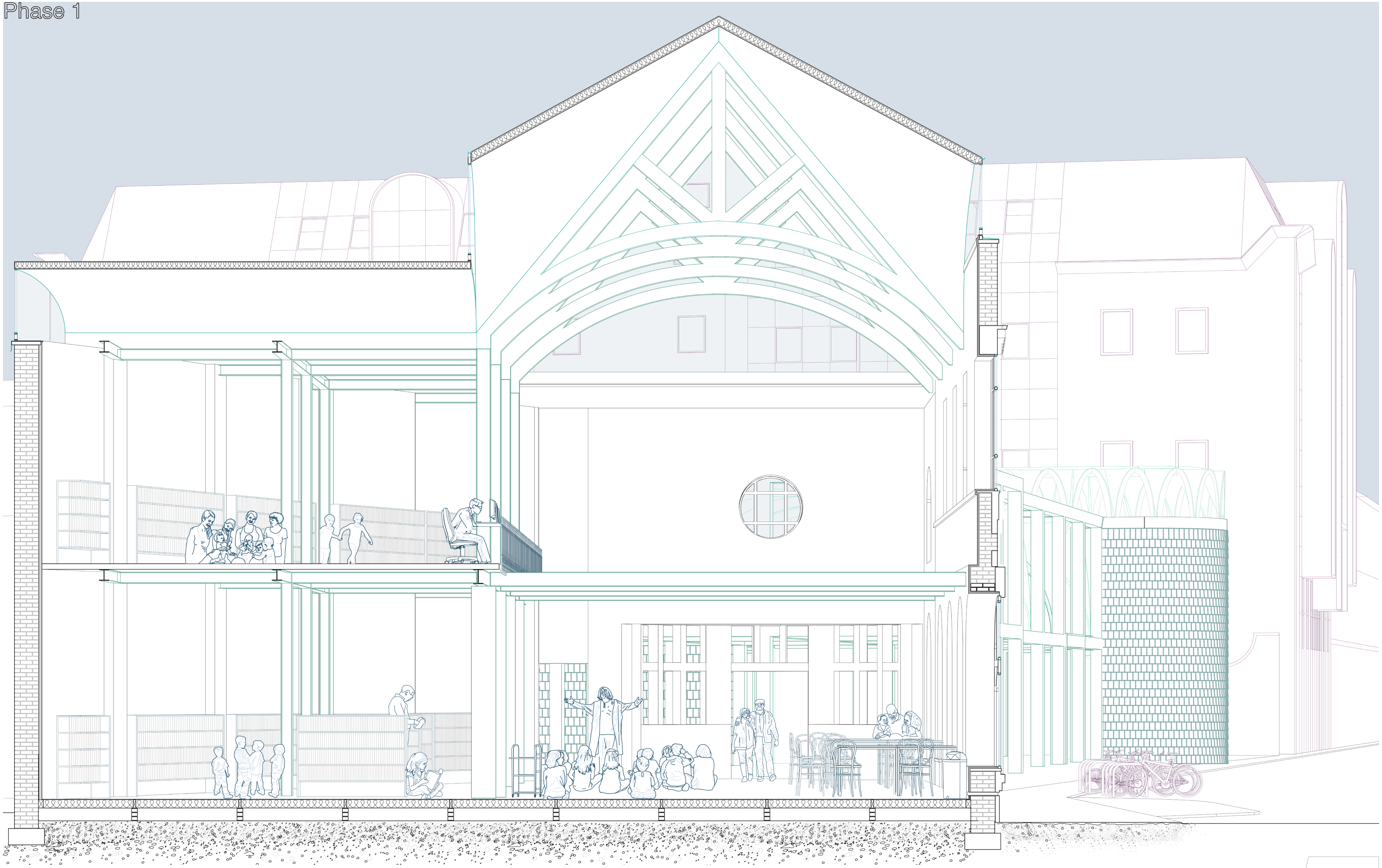
Reading by sunlight

Phase 1


Solar gains absorbed
by internal concrete & Masonry
Ventilation achieved through
the stack effect
Elements with high thermal
mass release absorbed heat
at night, reducing temperature
fluctuation

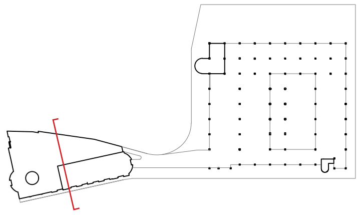
Ventilation strategy

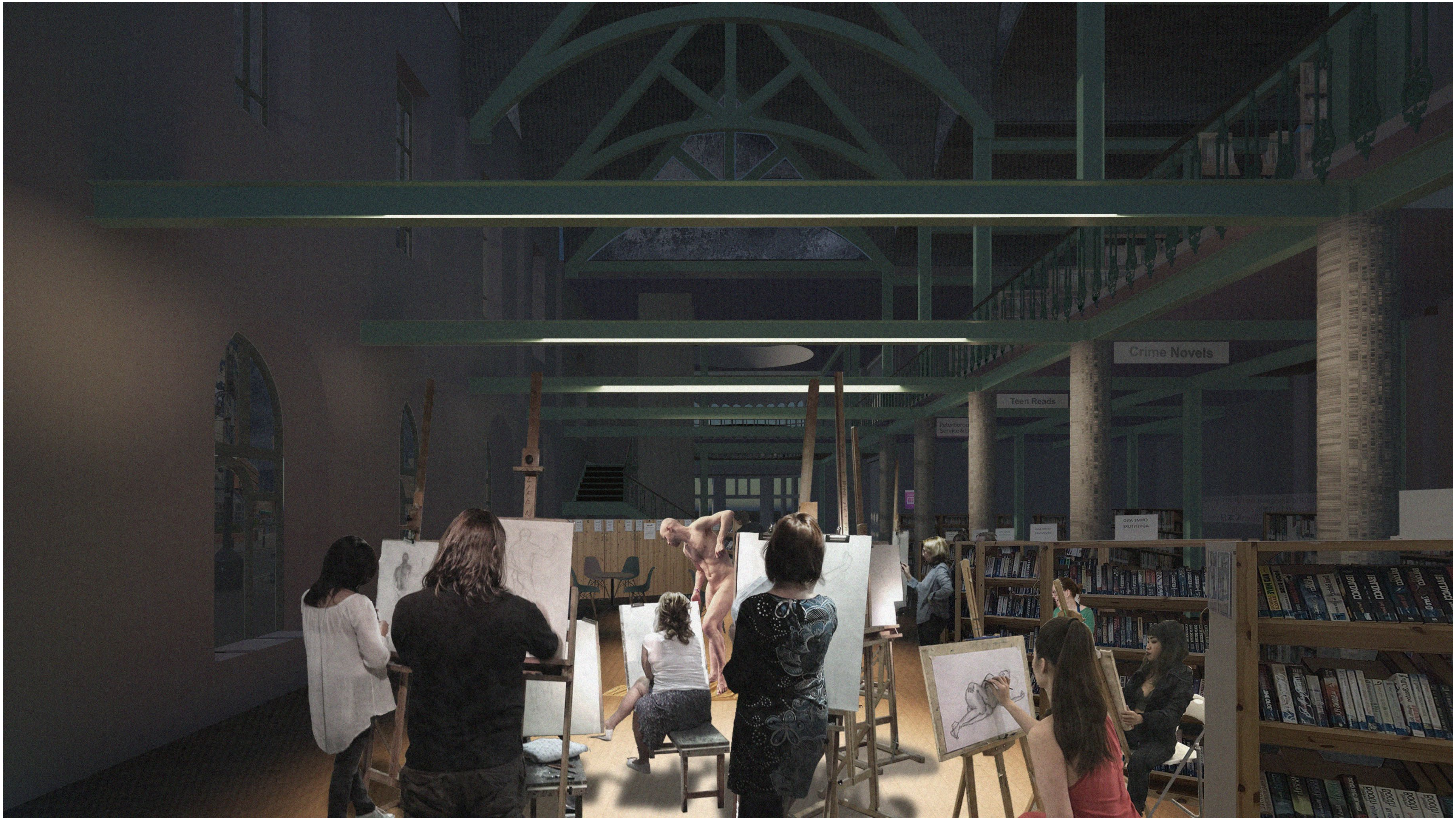
Phase 1



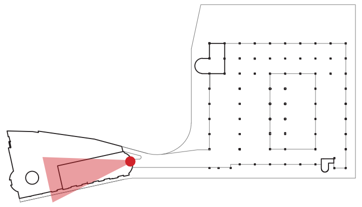
Carnegie Perspective Section B

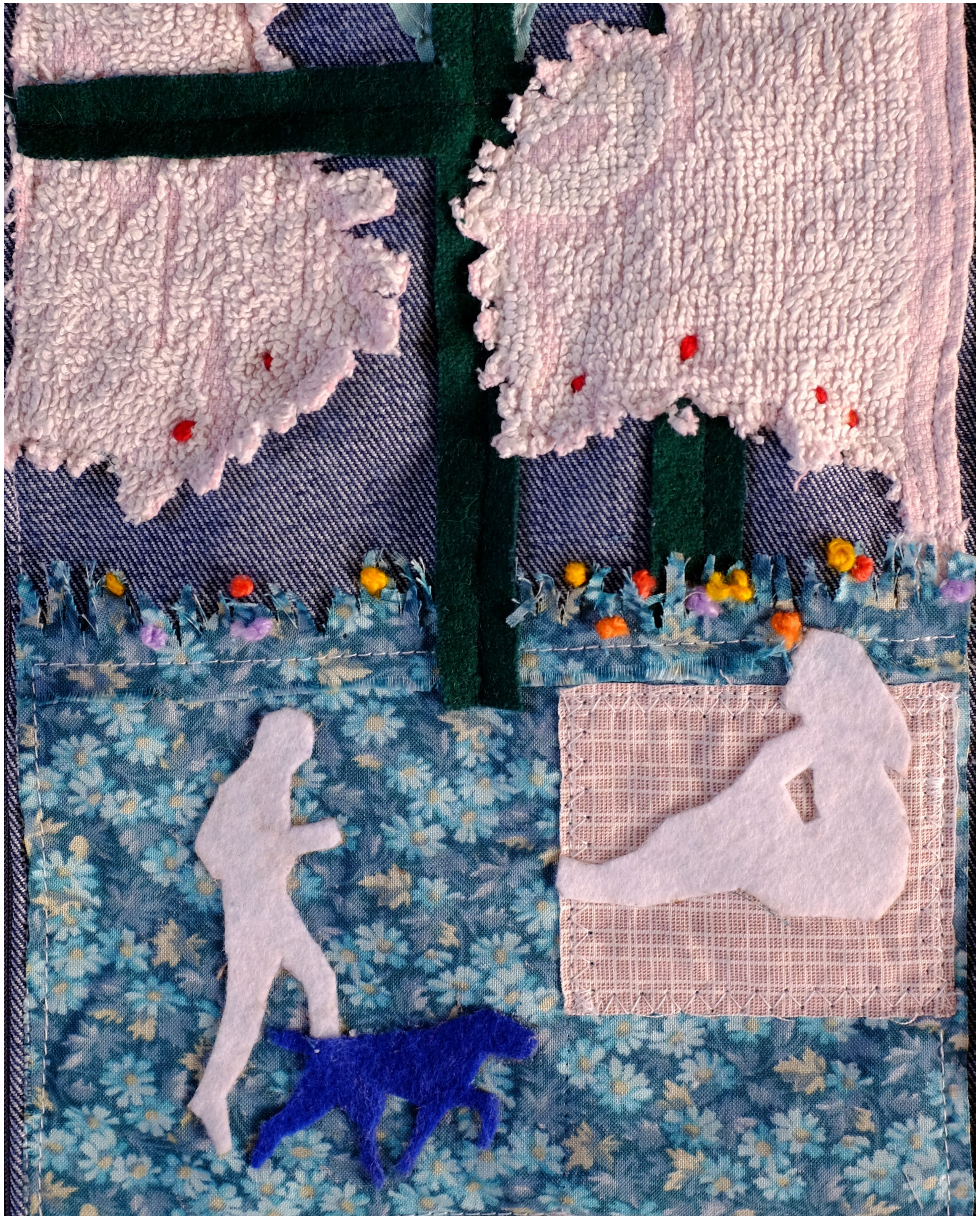
Carnegie Perspective Section





The library after dark

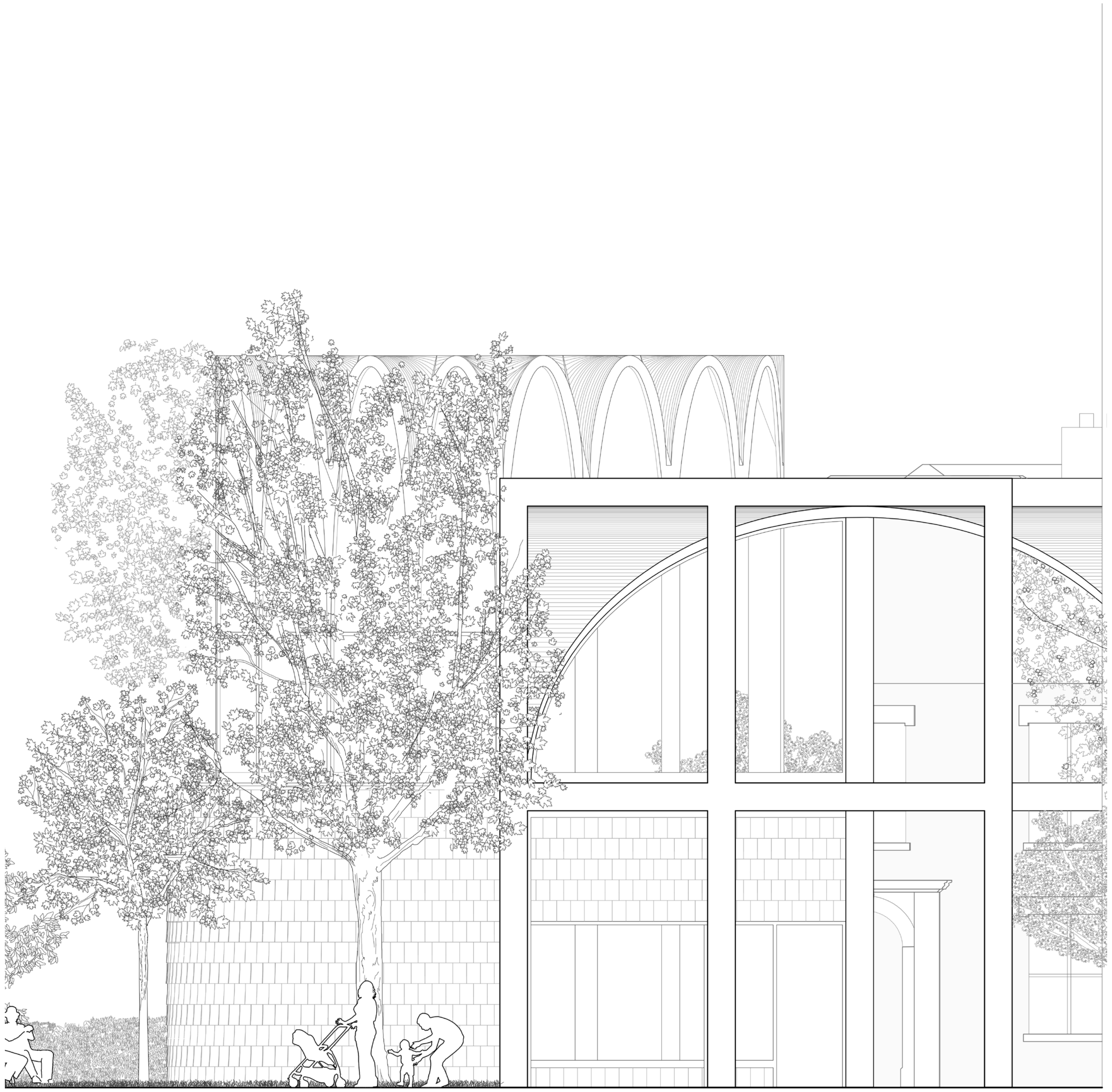




Phase 2- Central Library

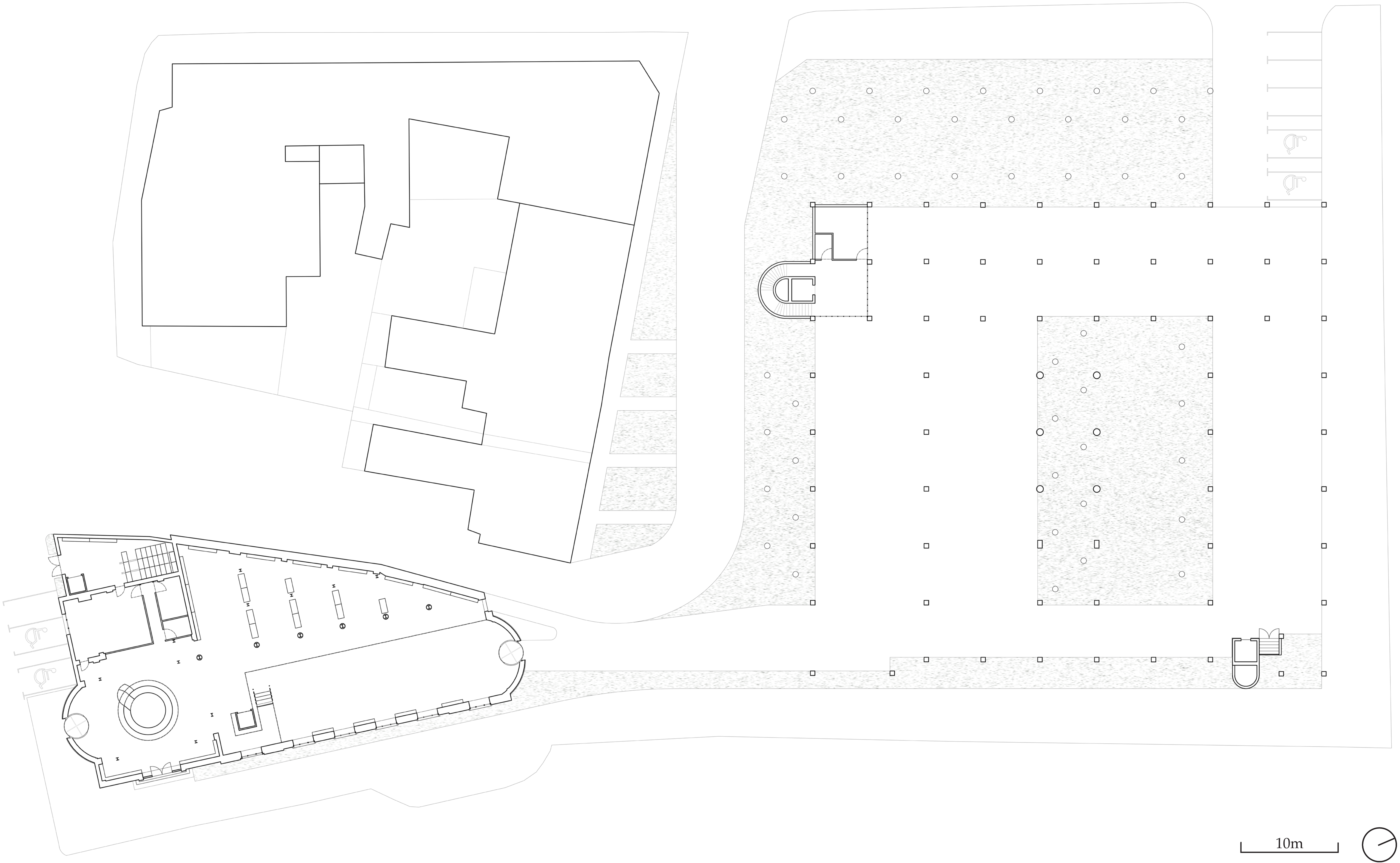
Textile

Phase 2



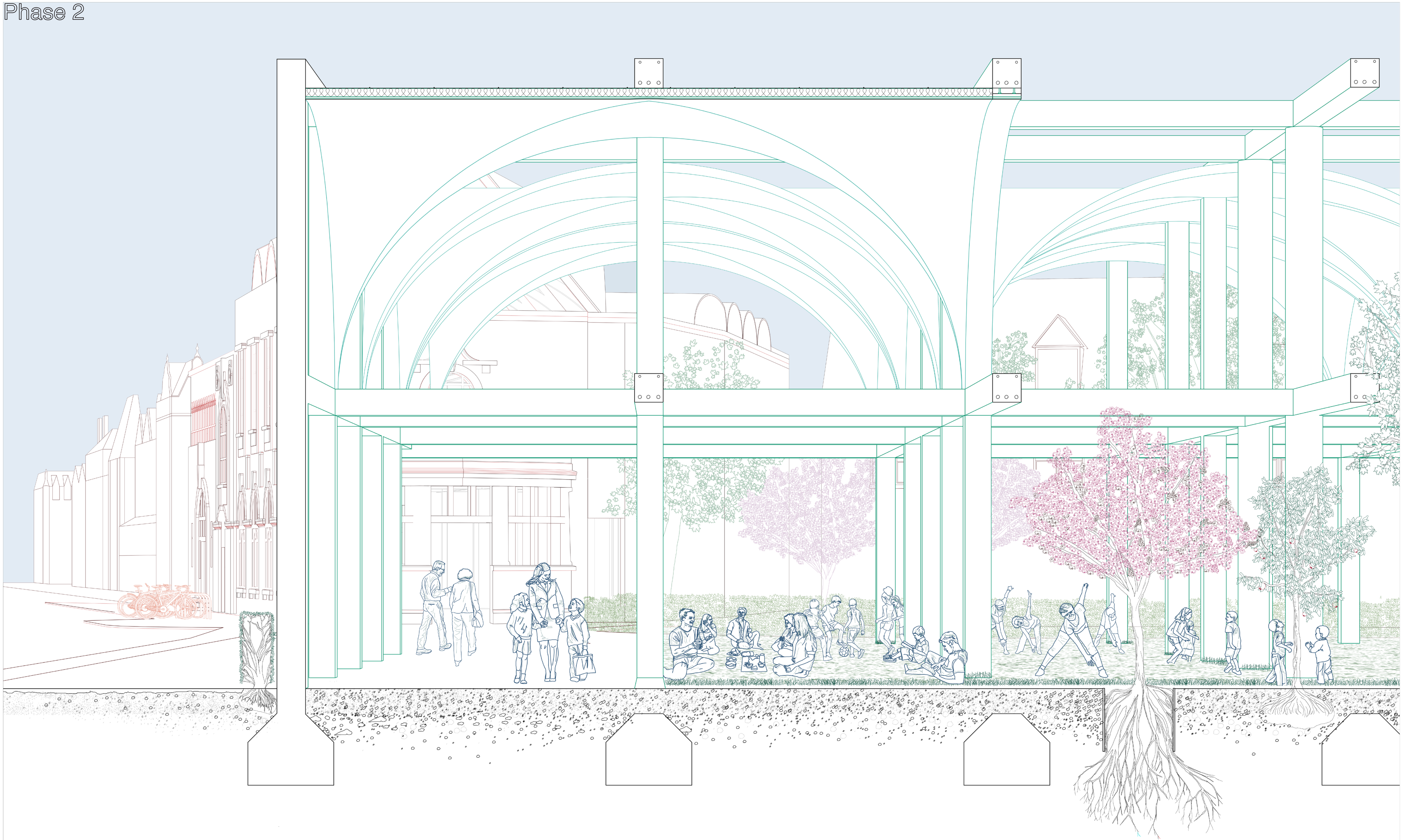
Patchworks of old and new, solace and social

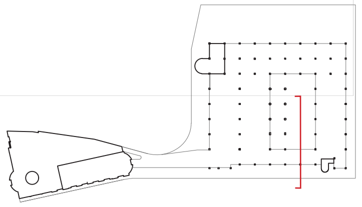
Phase 2

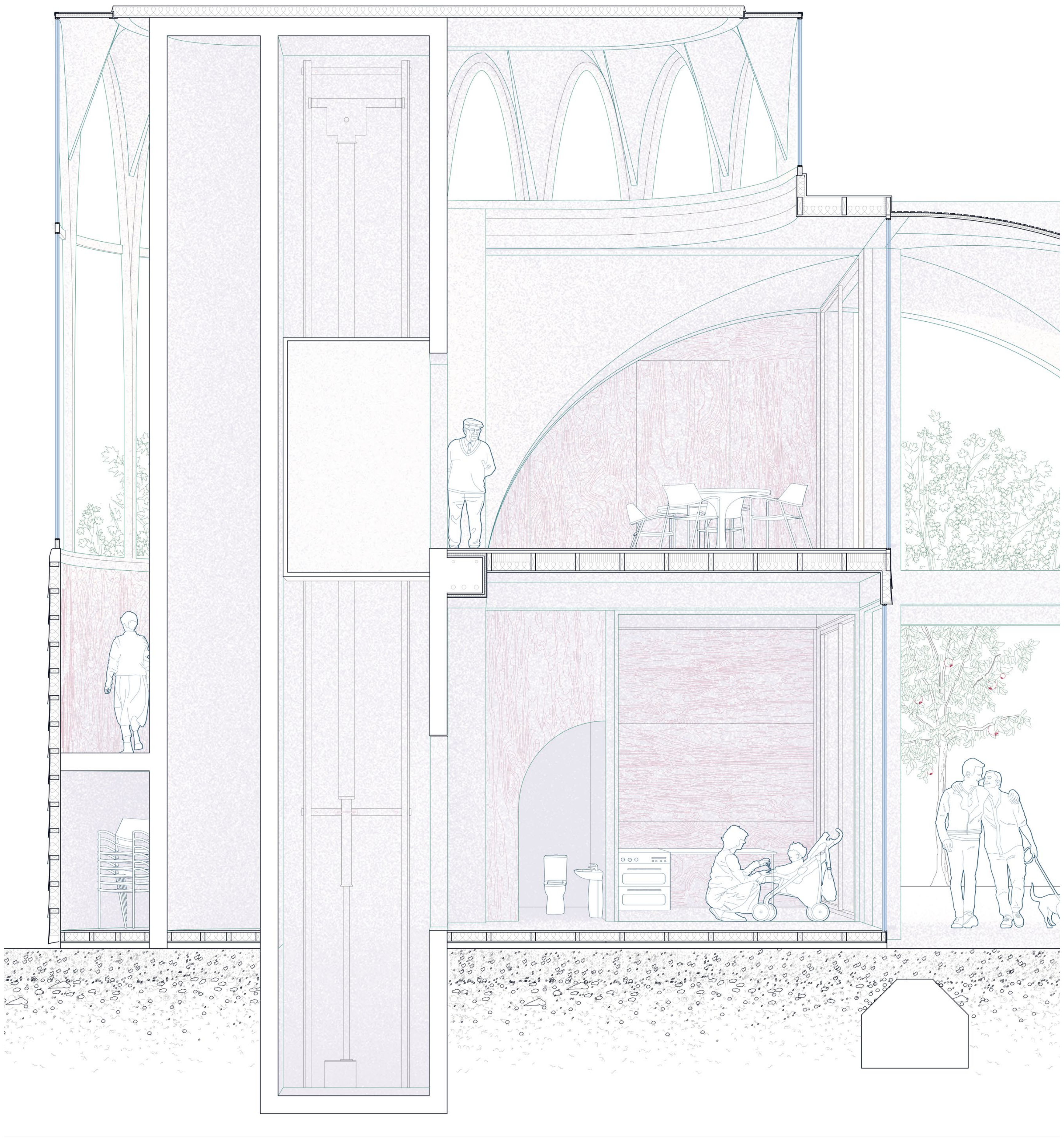


Proposal Plan

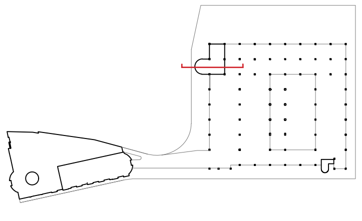
Phase 2

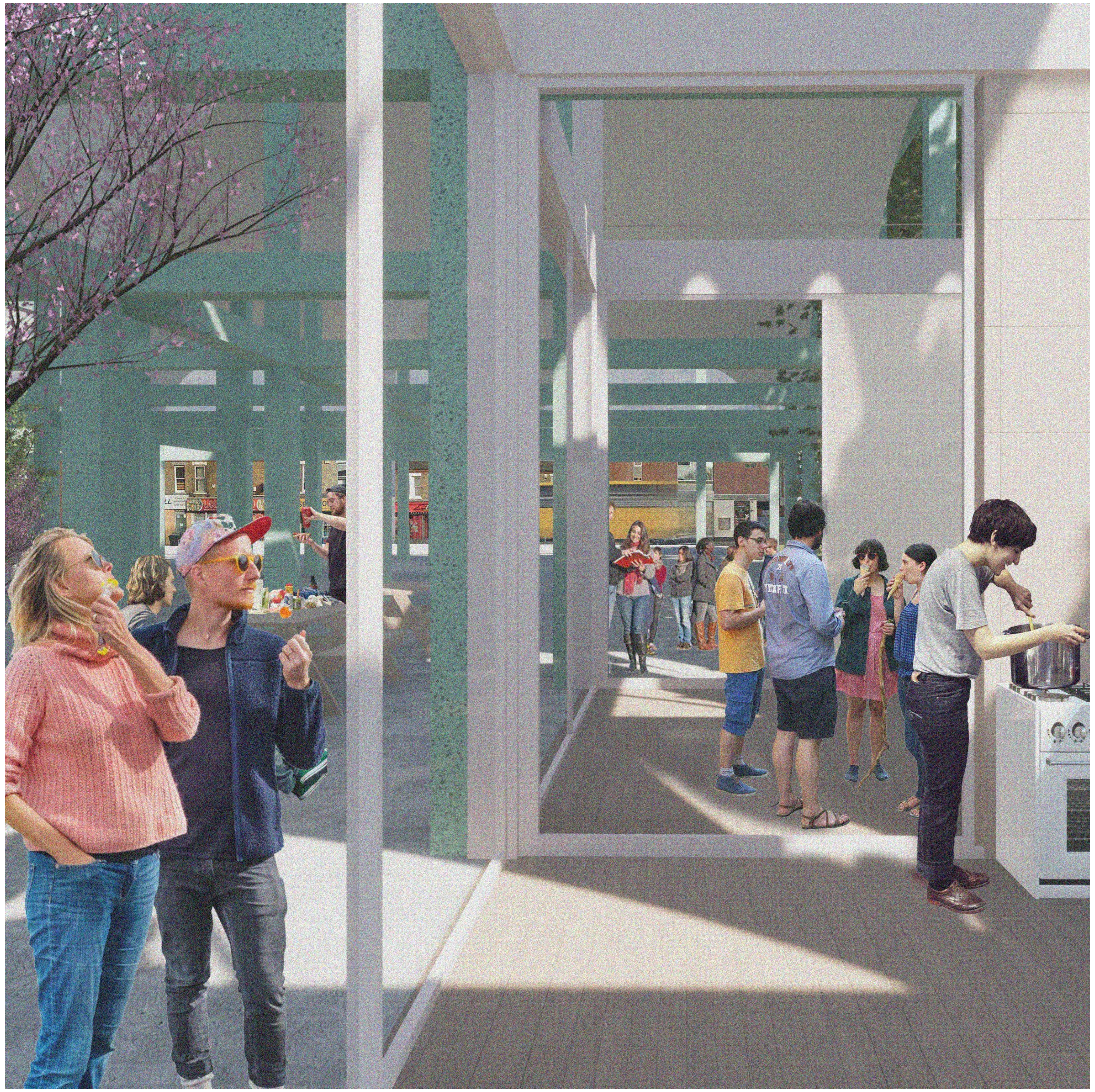




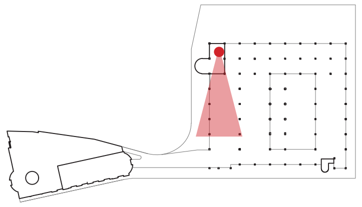


Service Enclosures

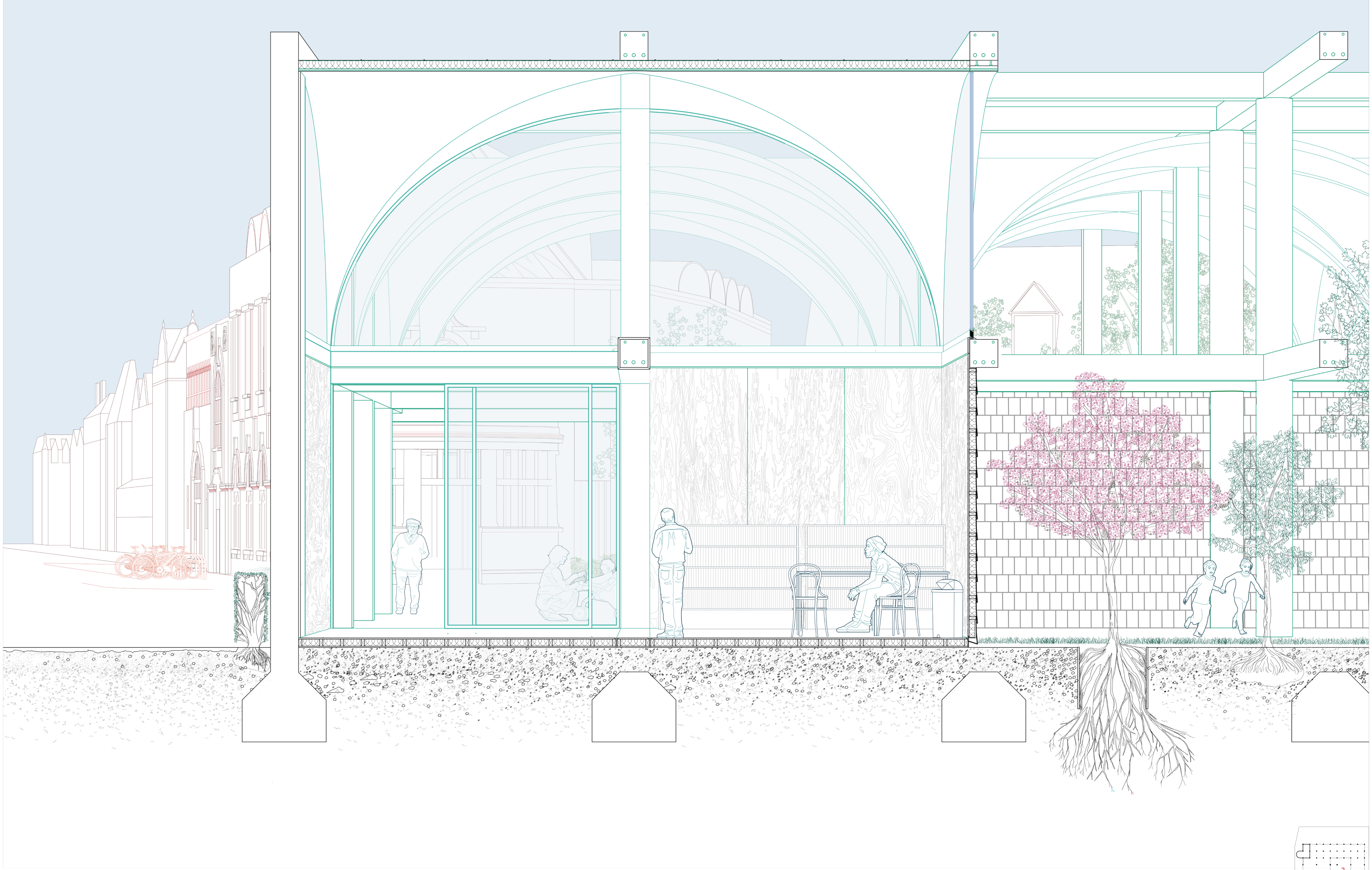


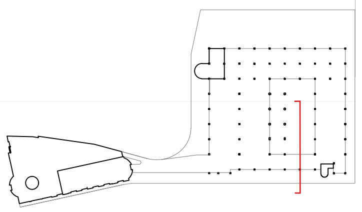


Service Enclosures

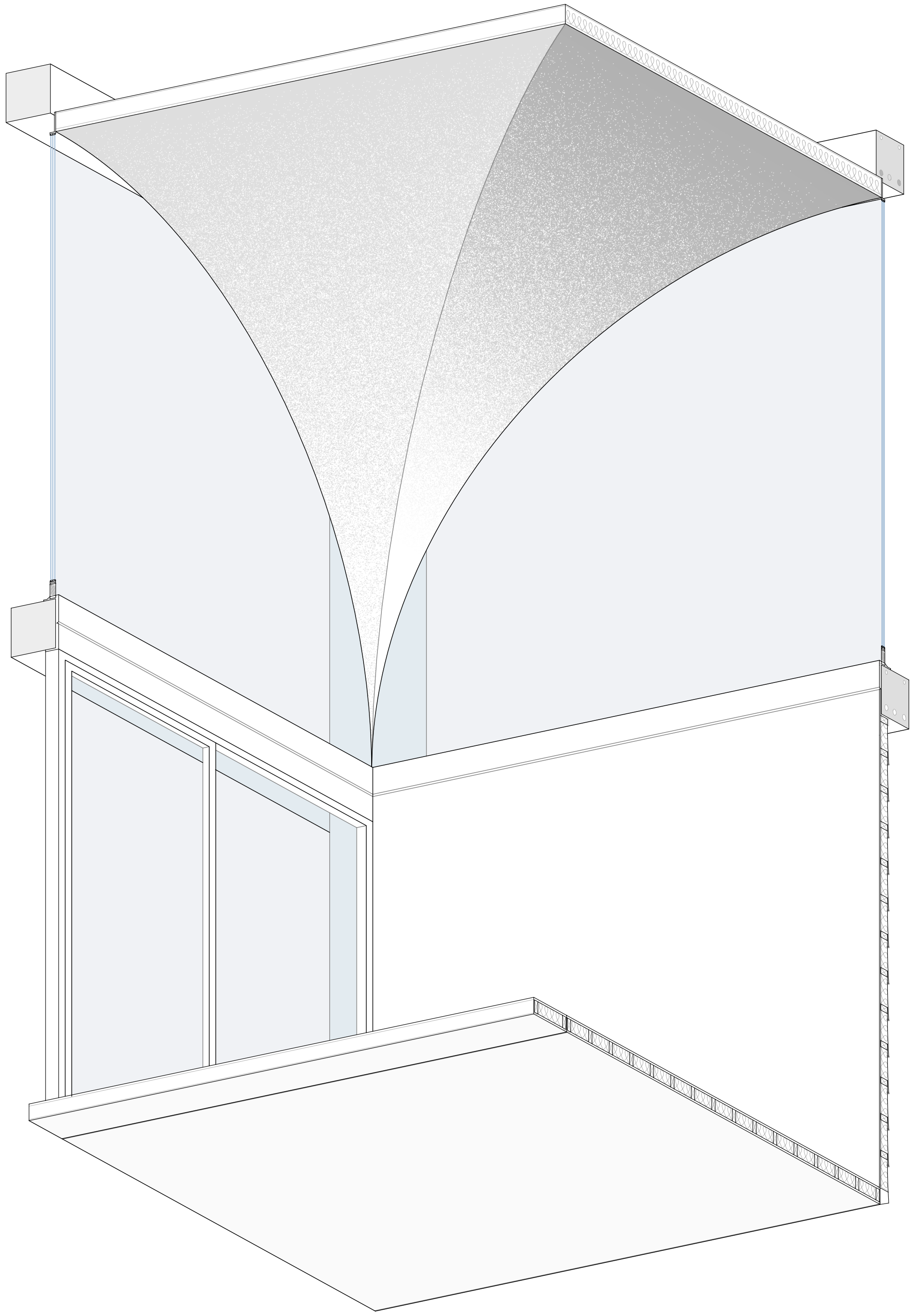


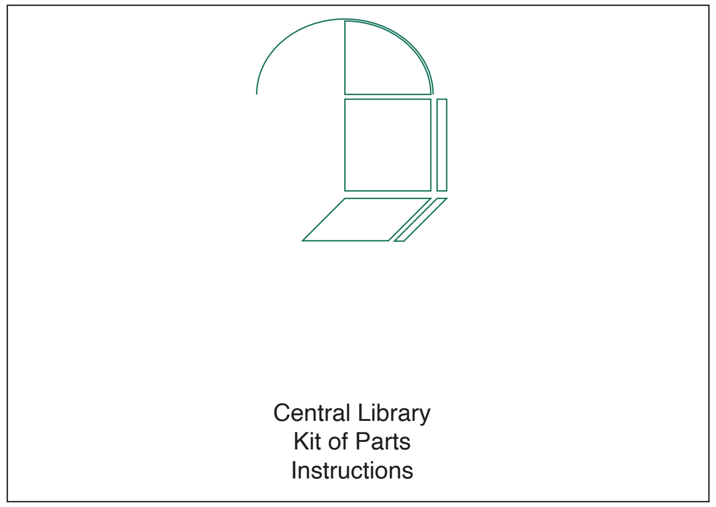
Phase 4

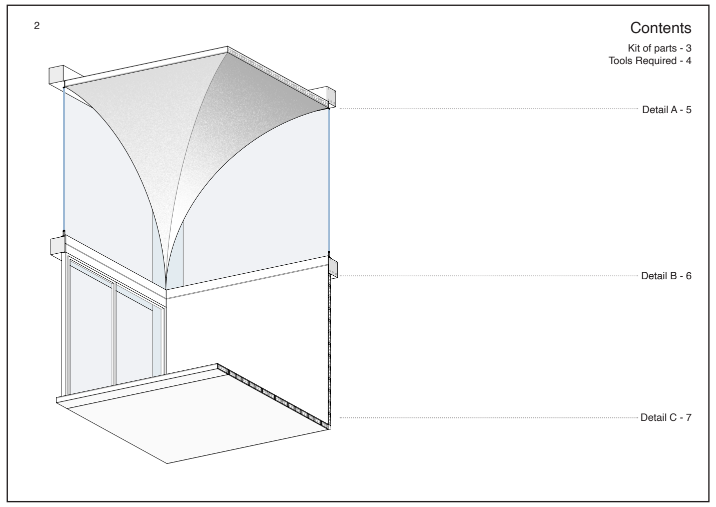


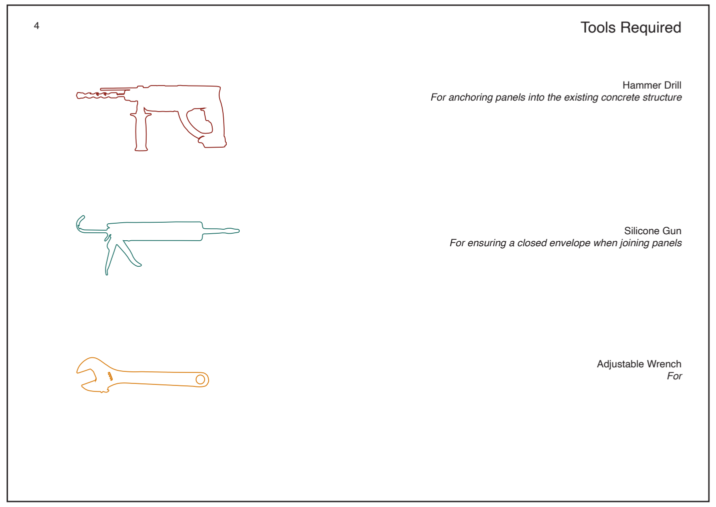


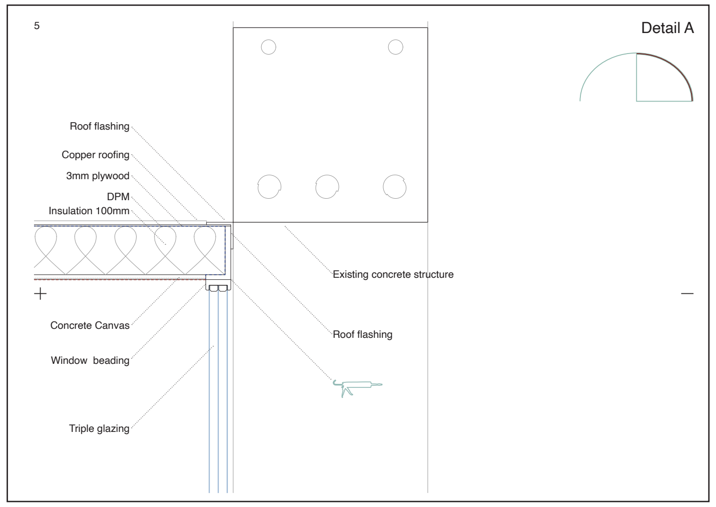
Phase 4

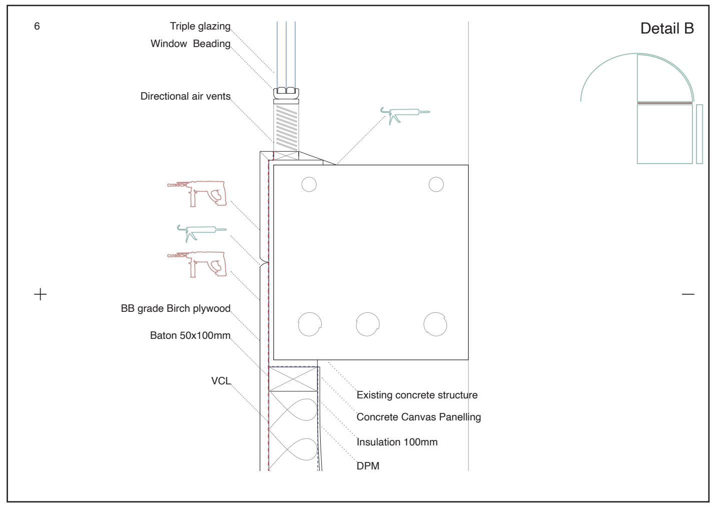


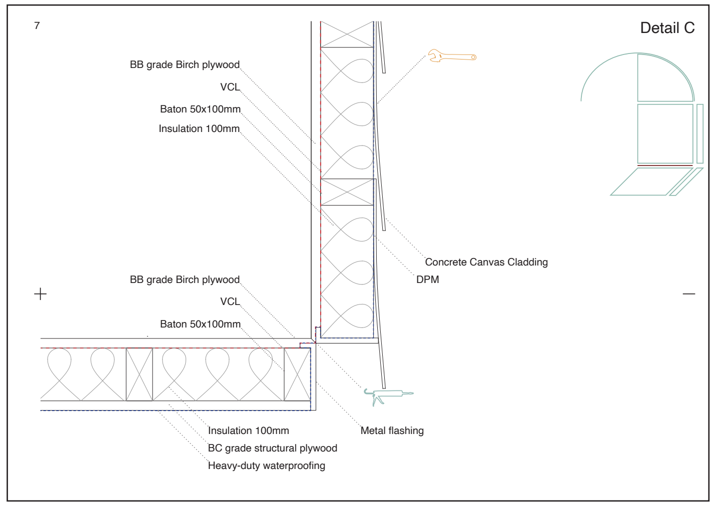





4
Tools Required
Hammer Drill
For anchoring panels into the existing concrete structure
Silicone Gun
For ensuring a closed envelope when joining panels
Adjustable Wrench
For



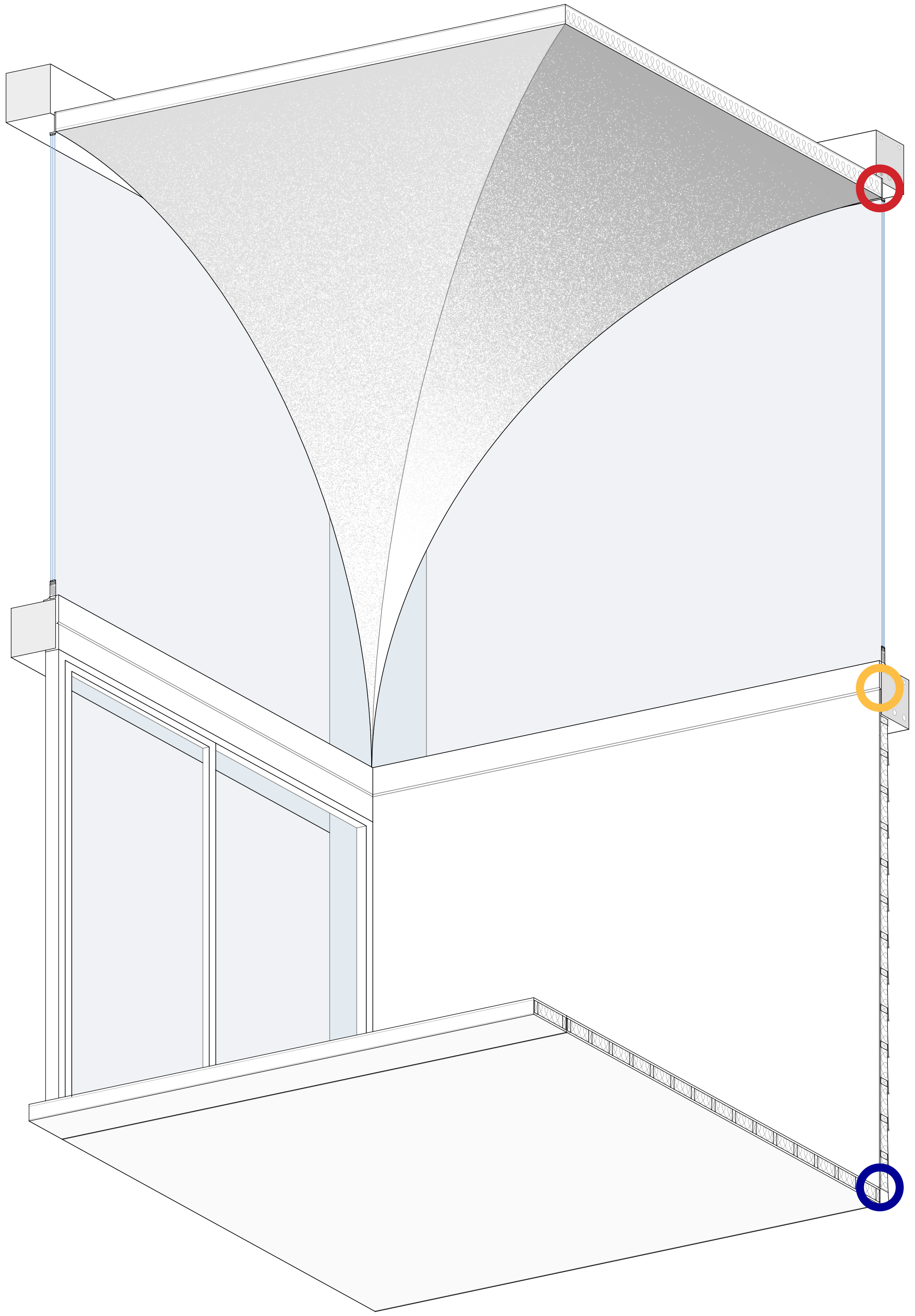


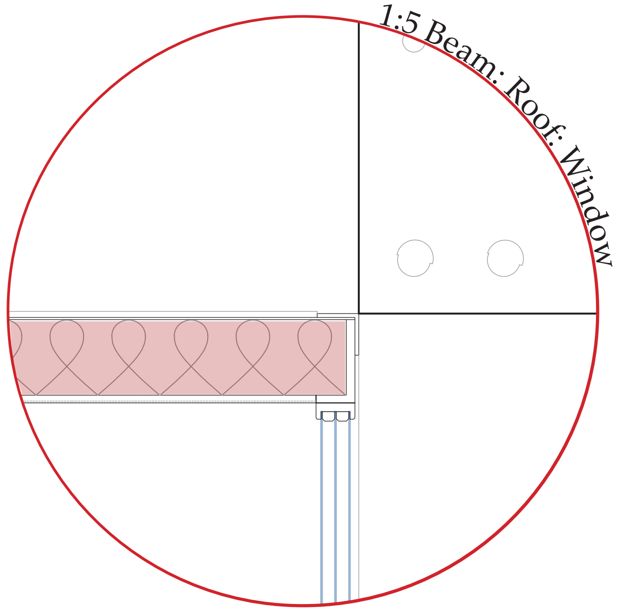


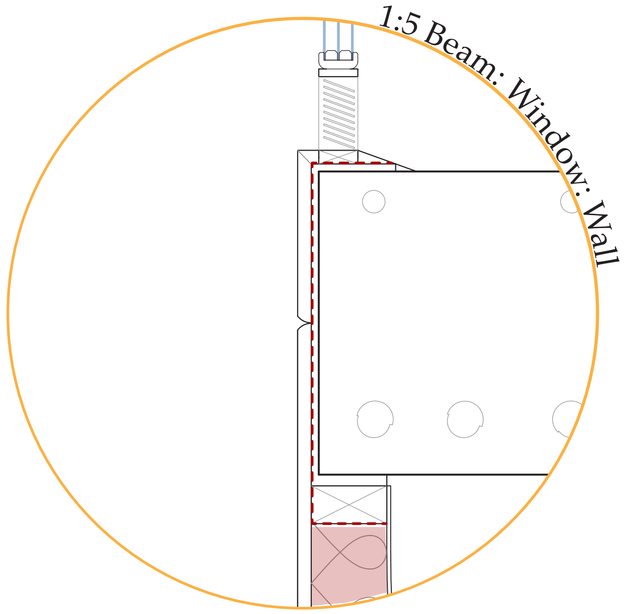
A modular kit of parts

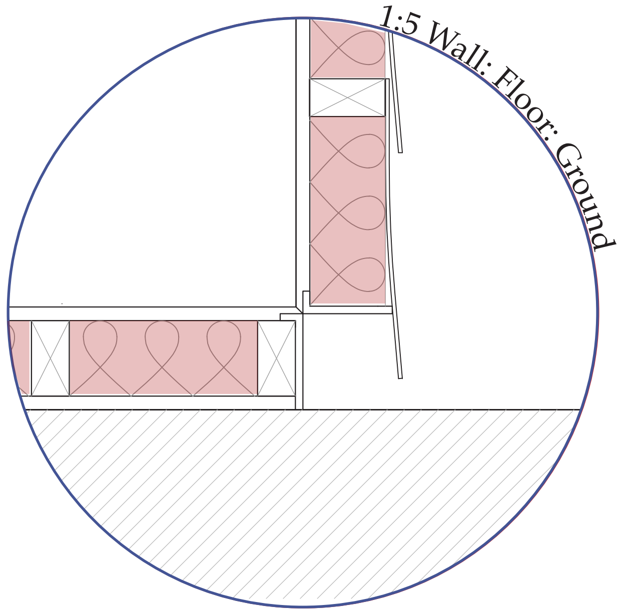
Booklet detailing Library reassemblage
(see appendix)

Phase 4



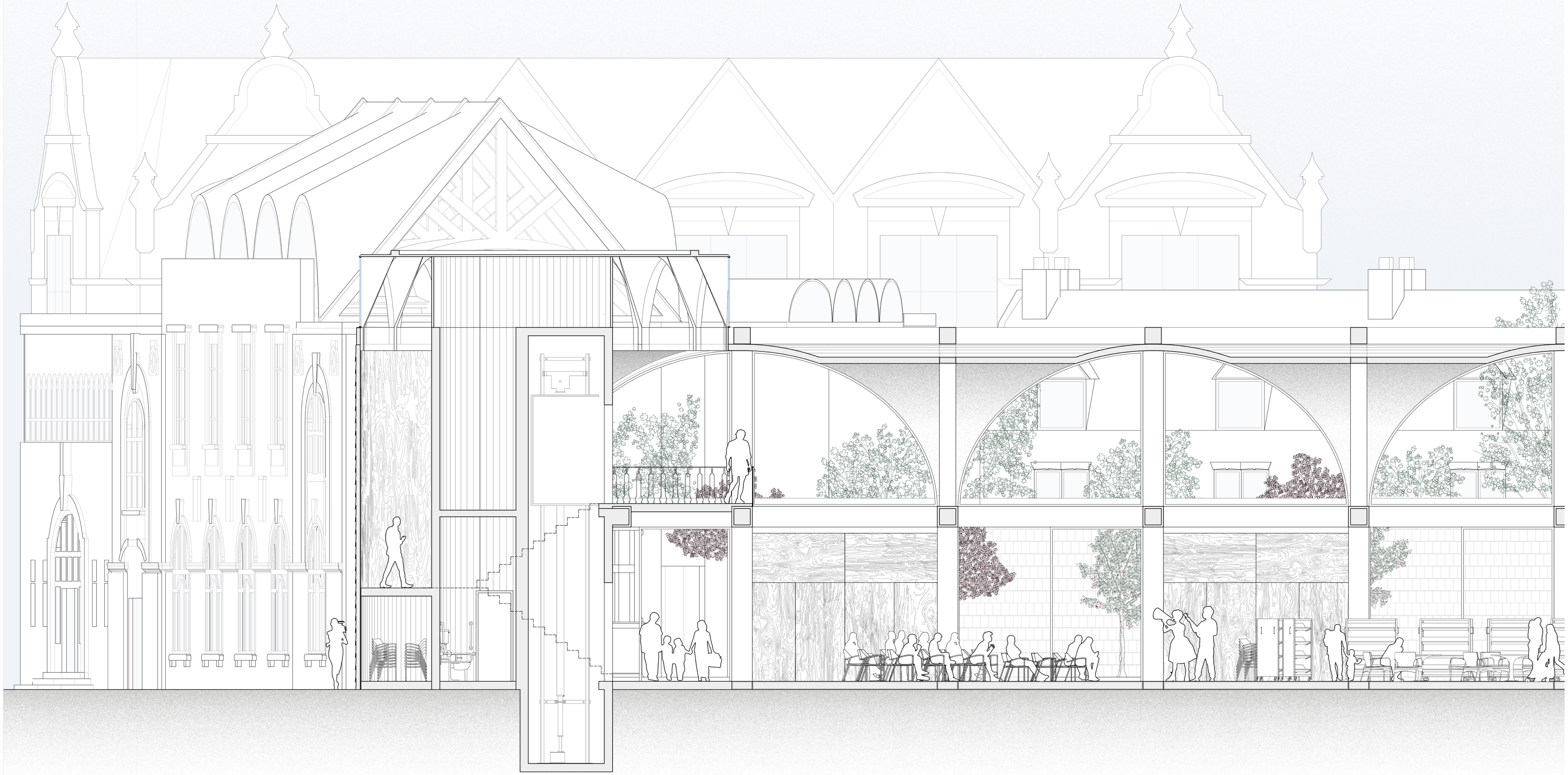




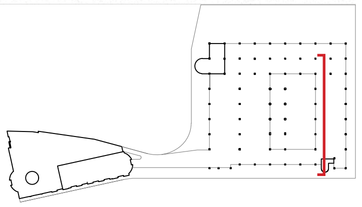


The library can be rebuilt through low-tech components

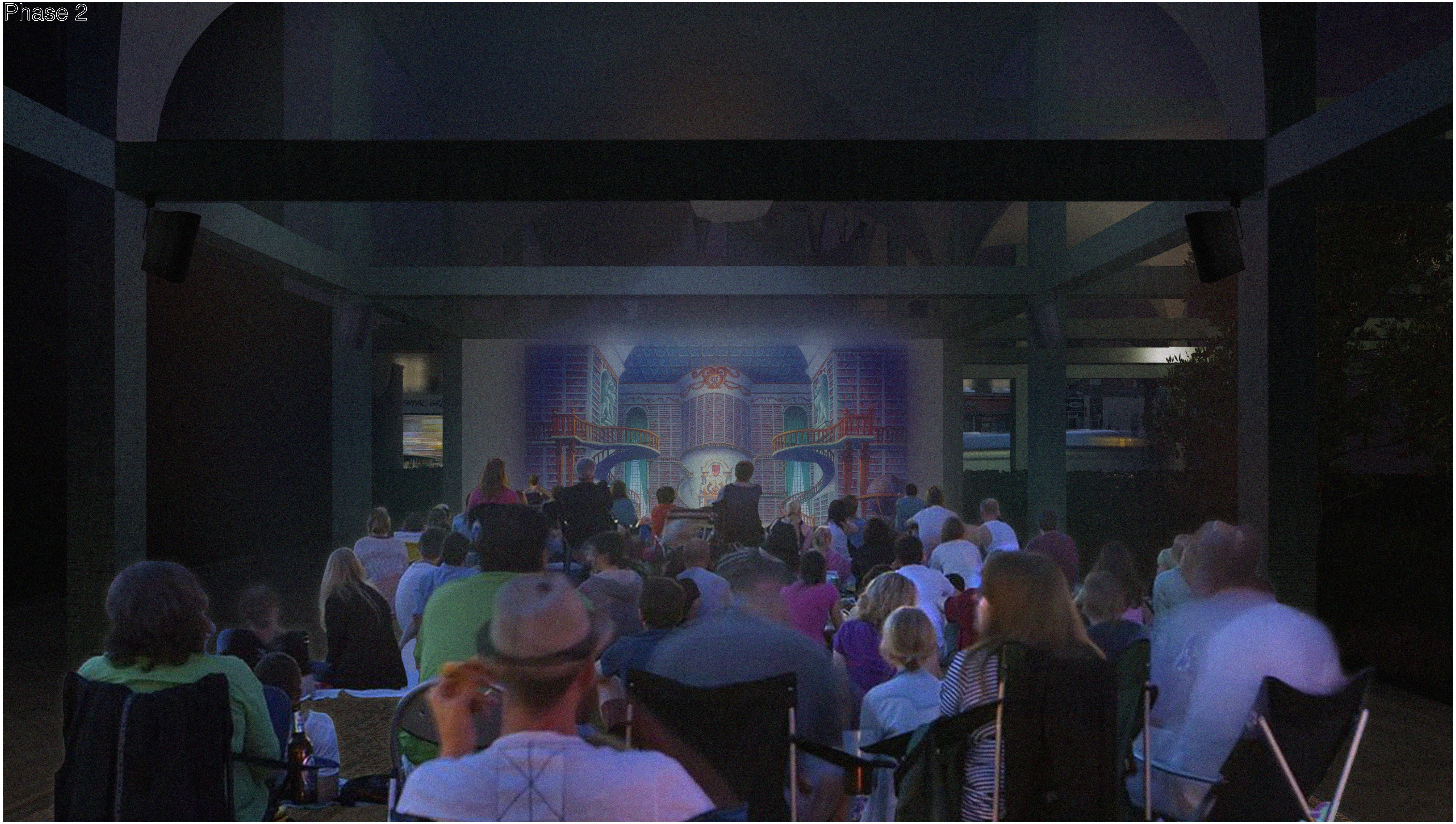
Phase 4

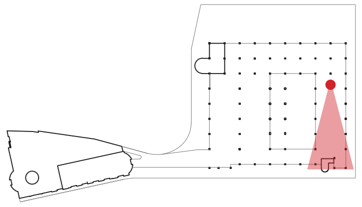


Section through reassembled Central Library

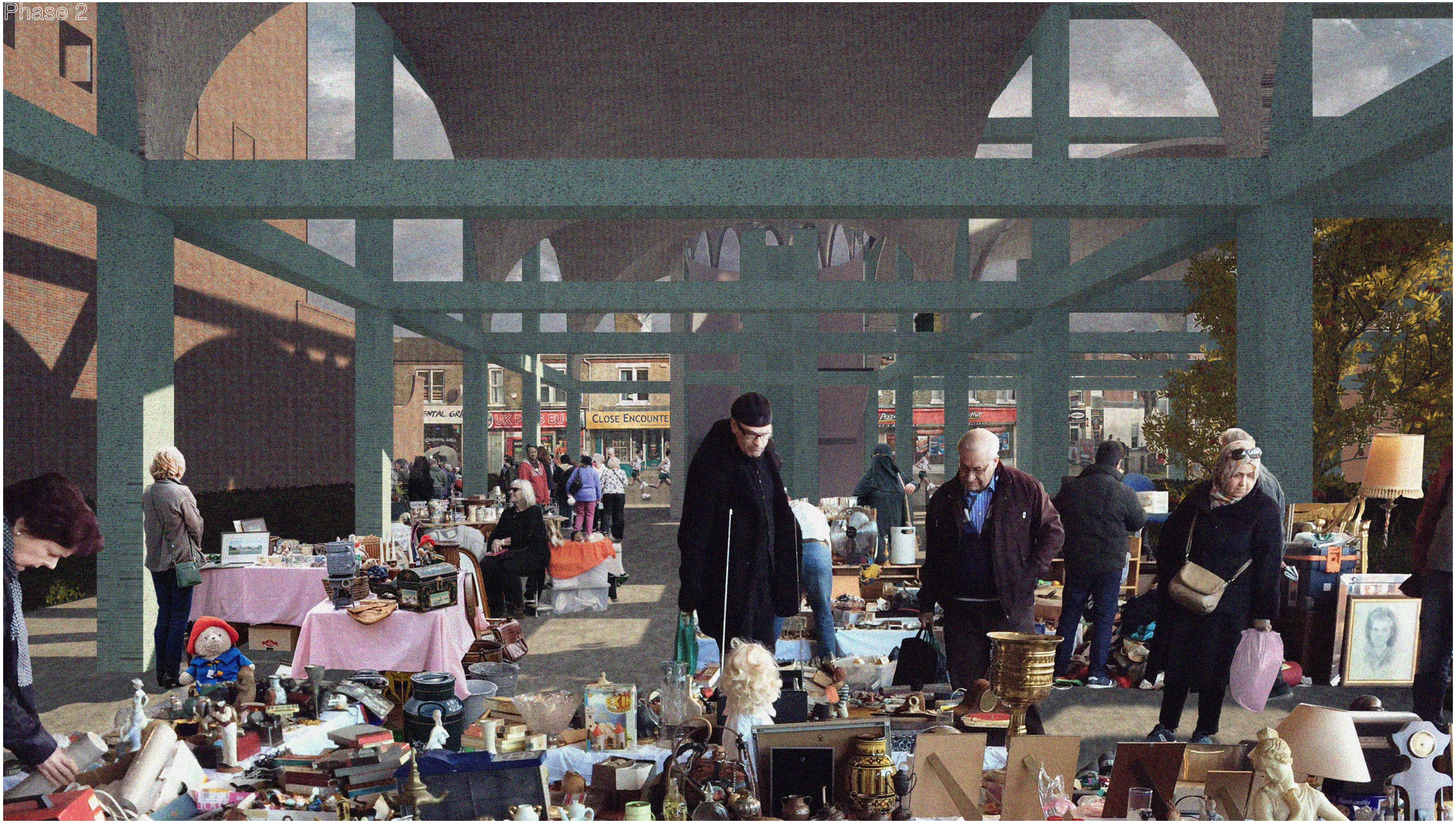


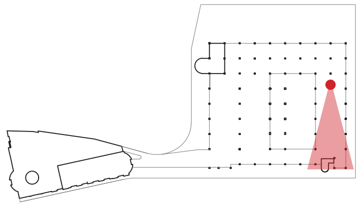
Phase 2

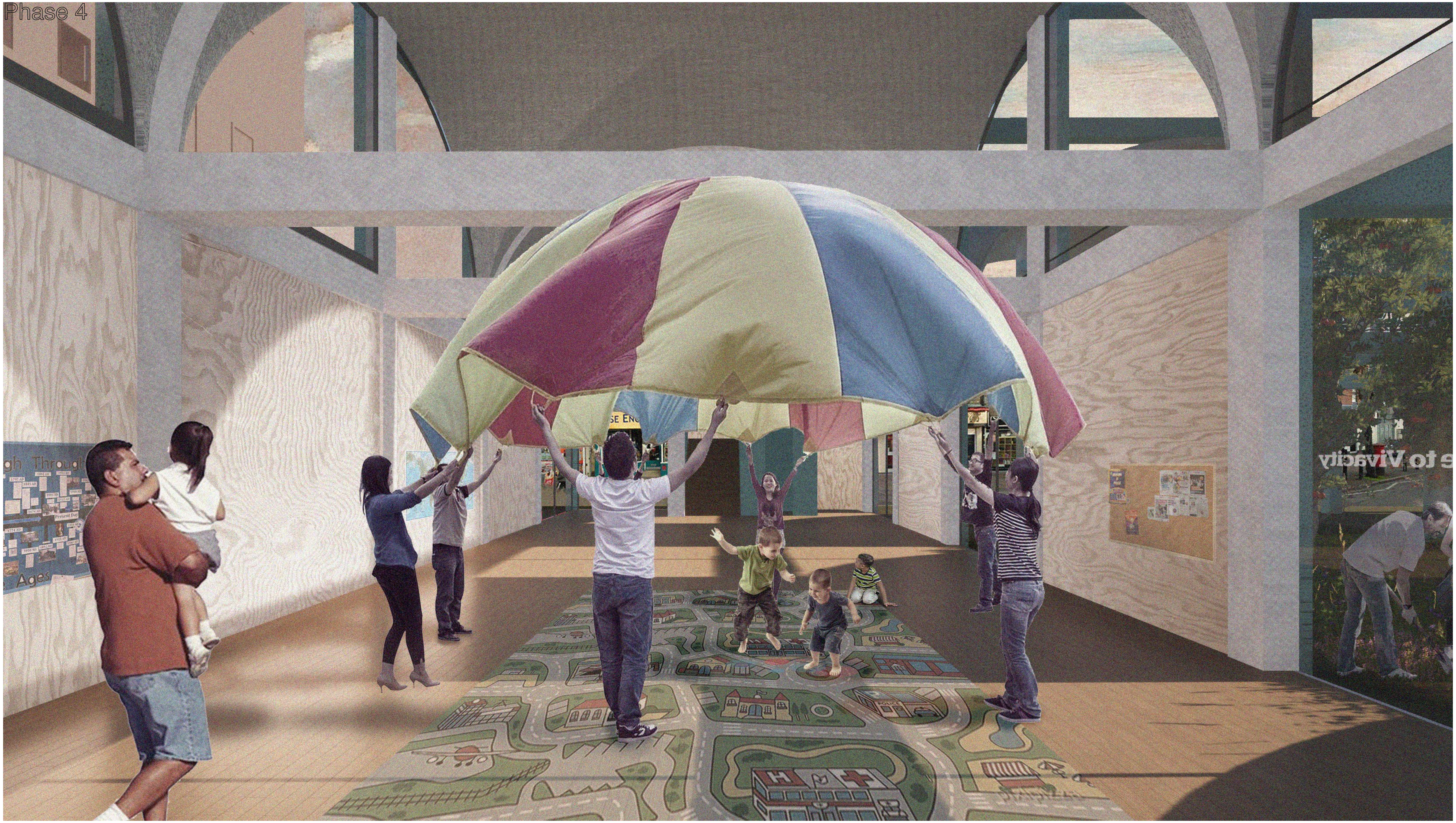


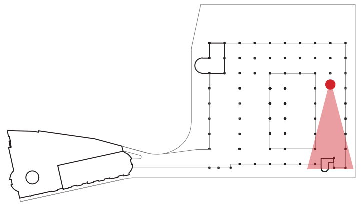


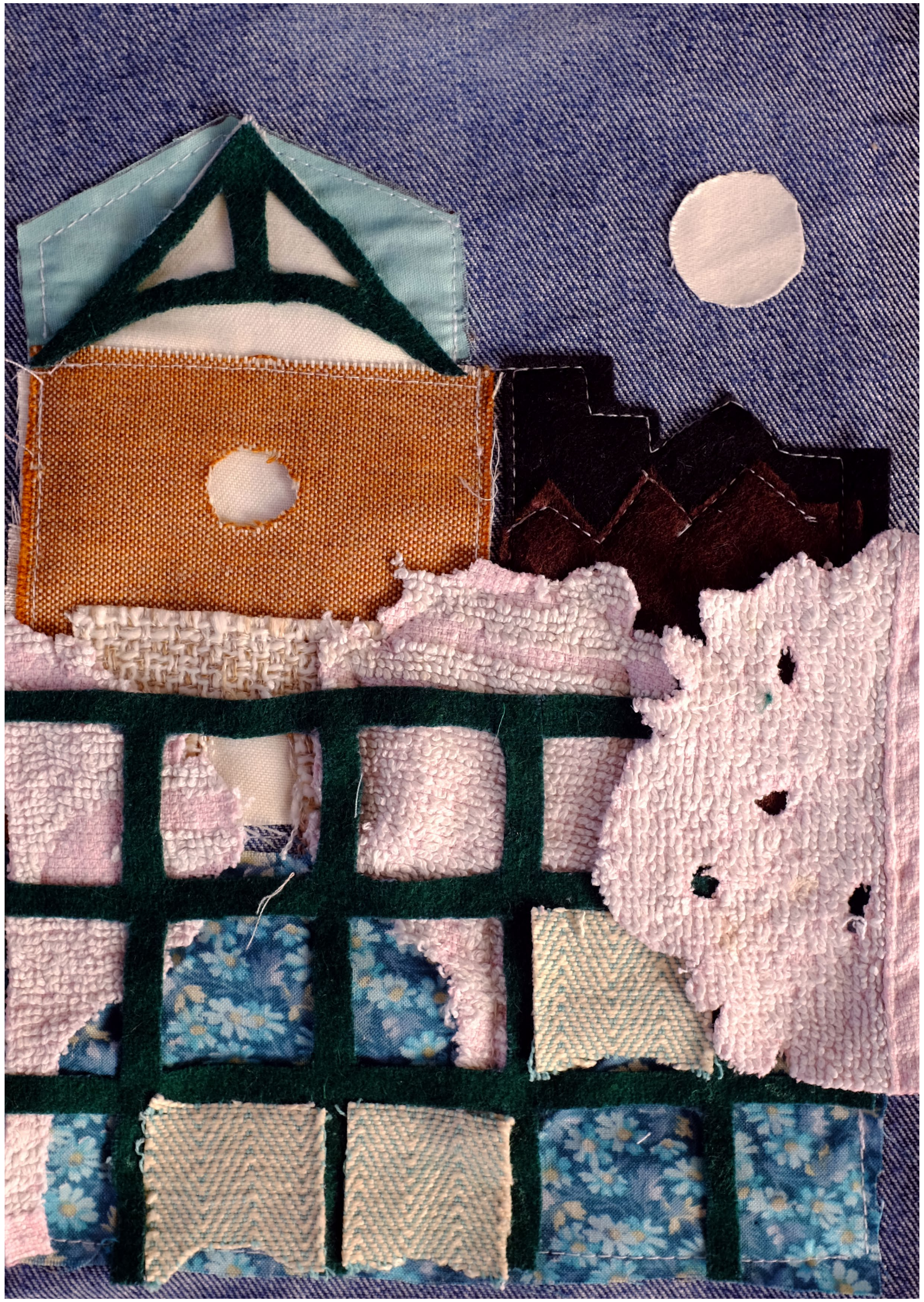
Phase 2



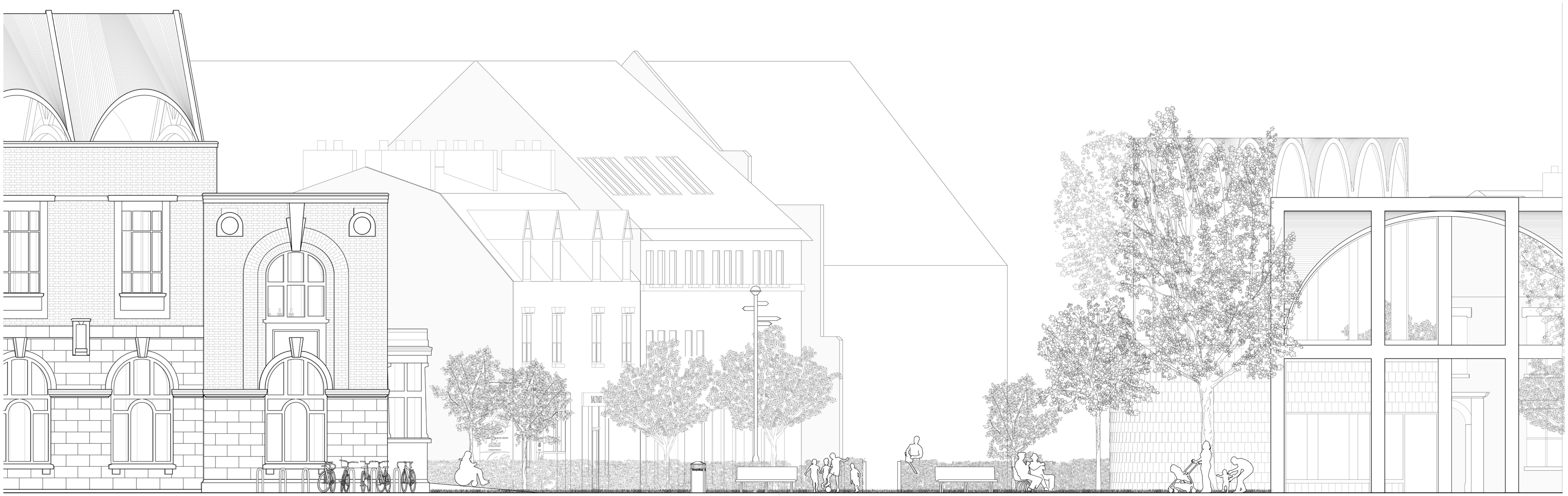



Phase 4

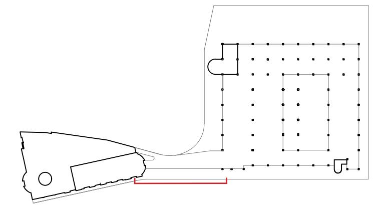




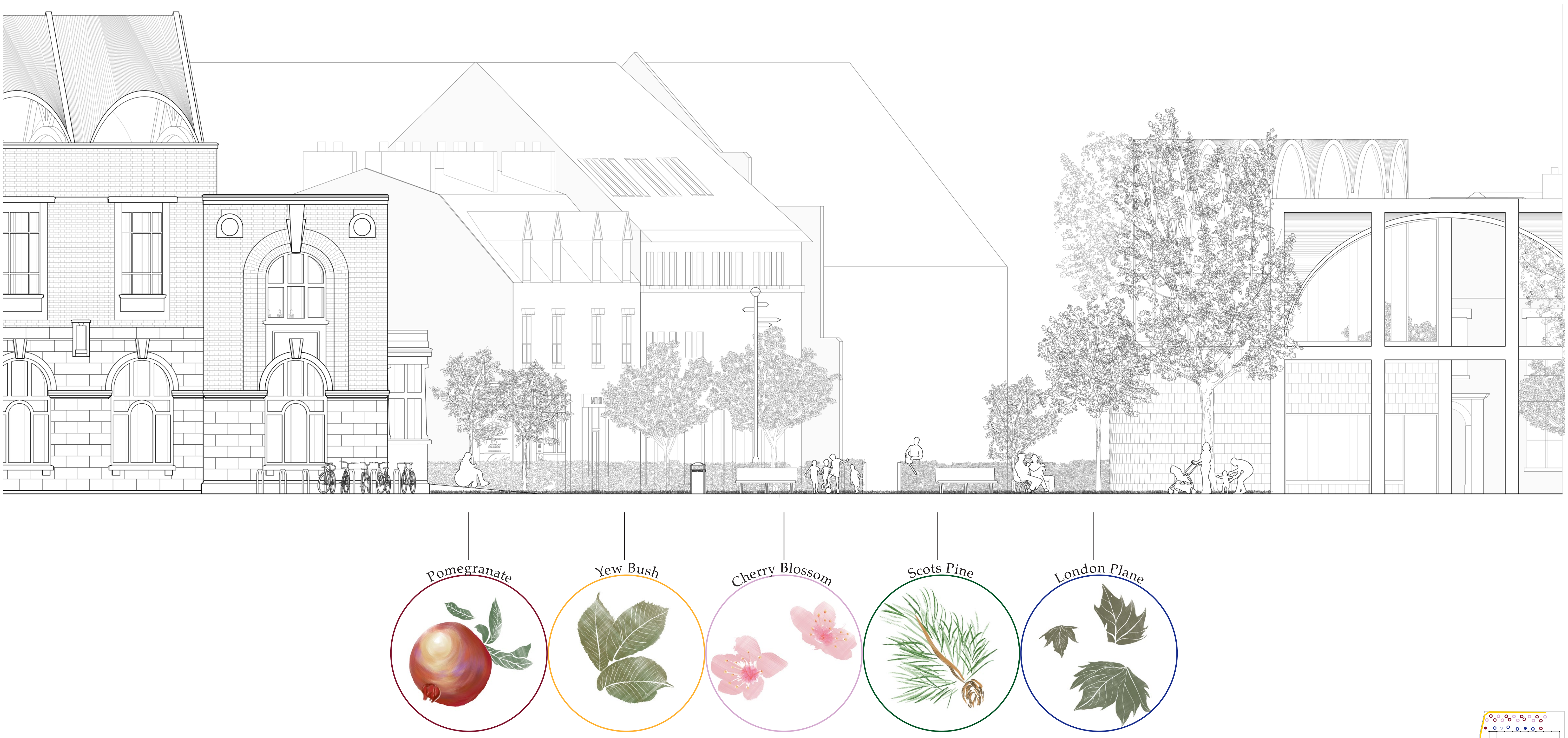
The library in the garden



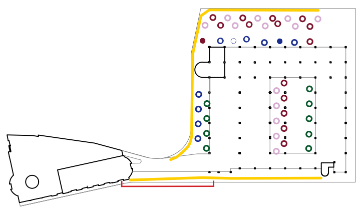
Elevation through garden

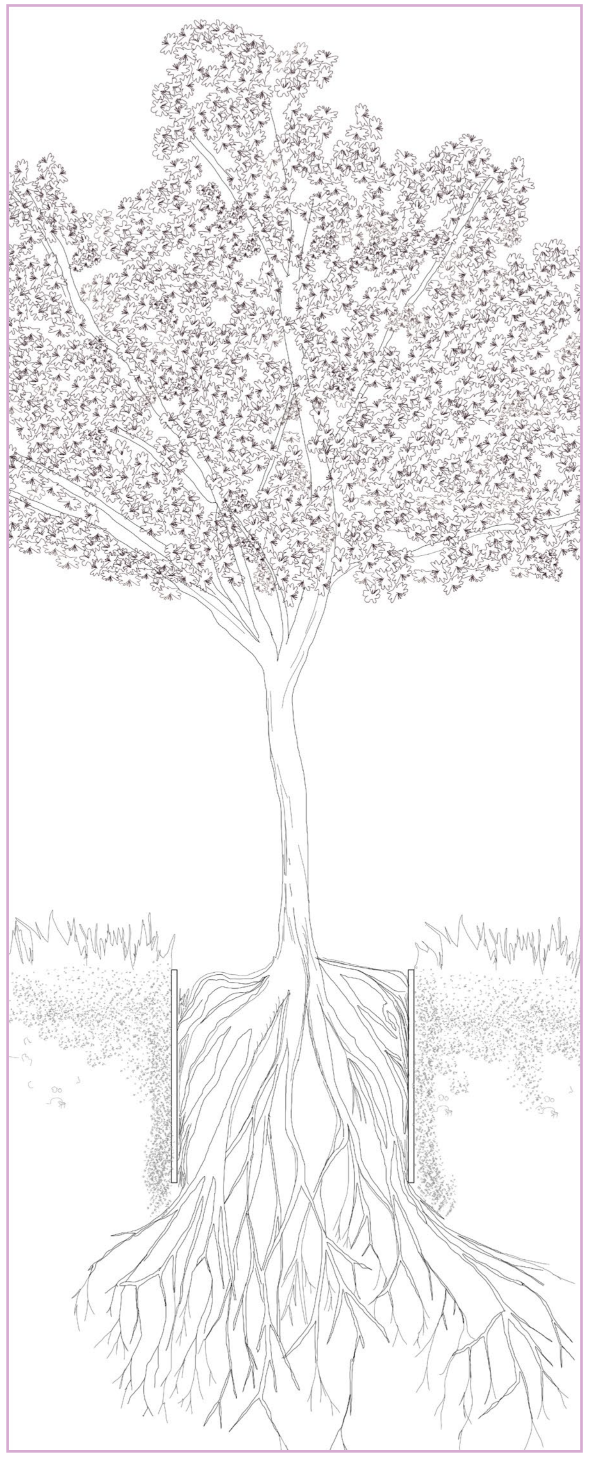


Phase 3

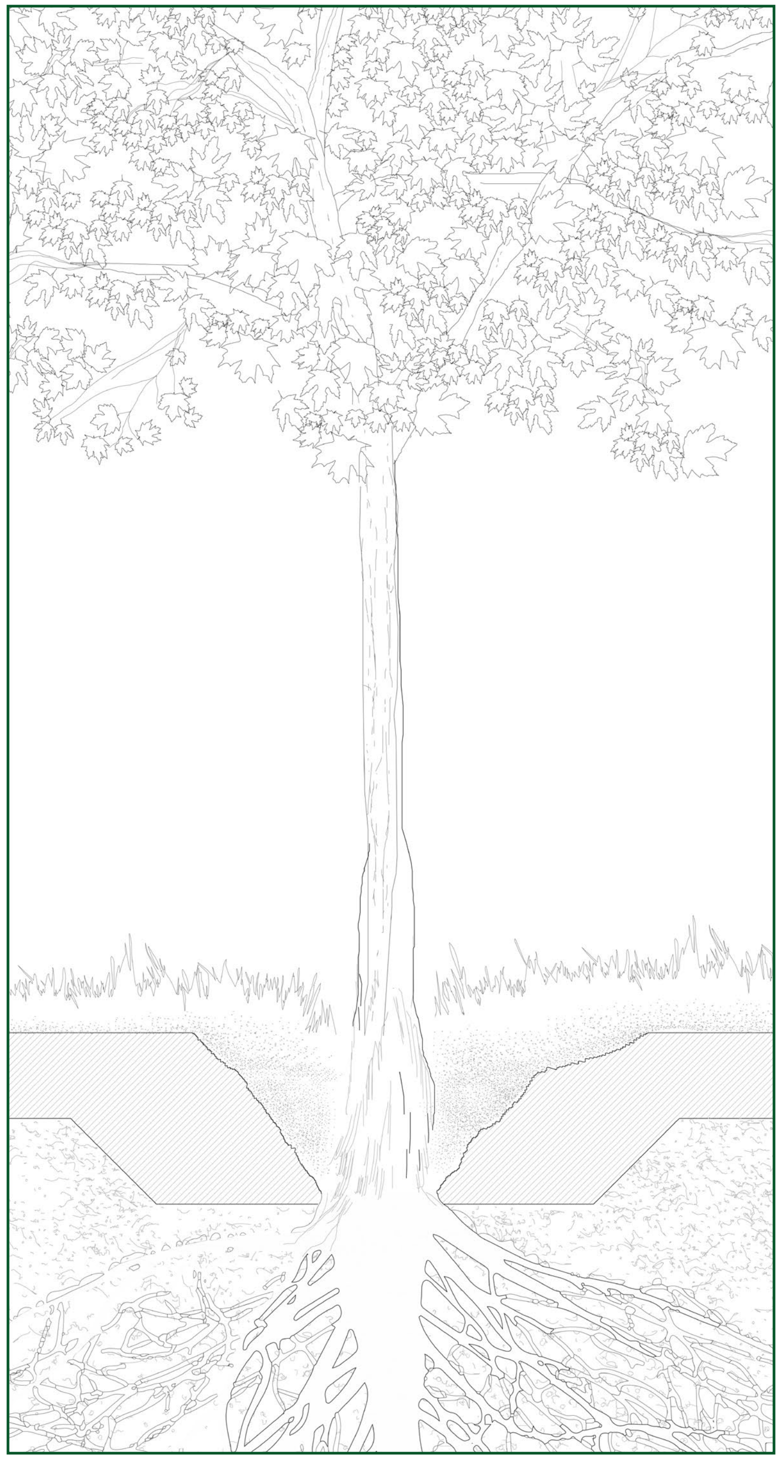


Planting strategy

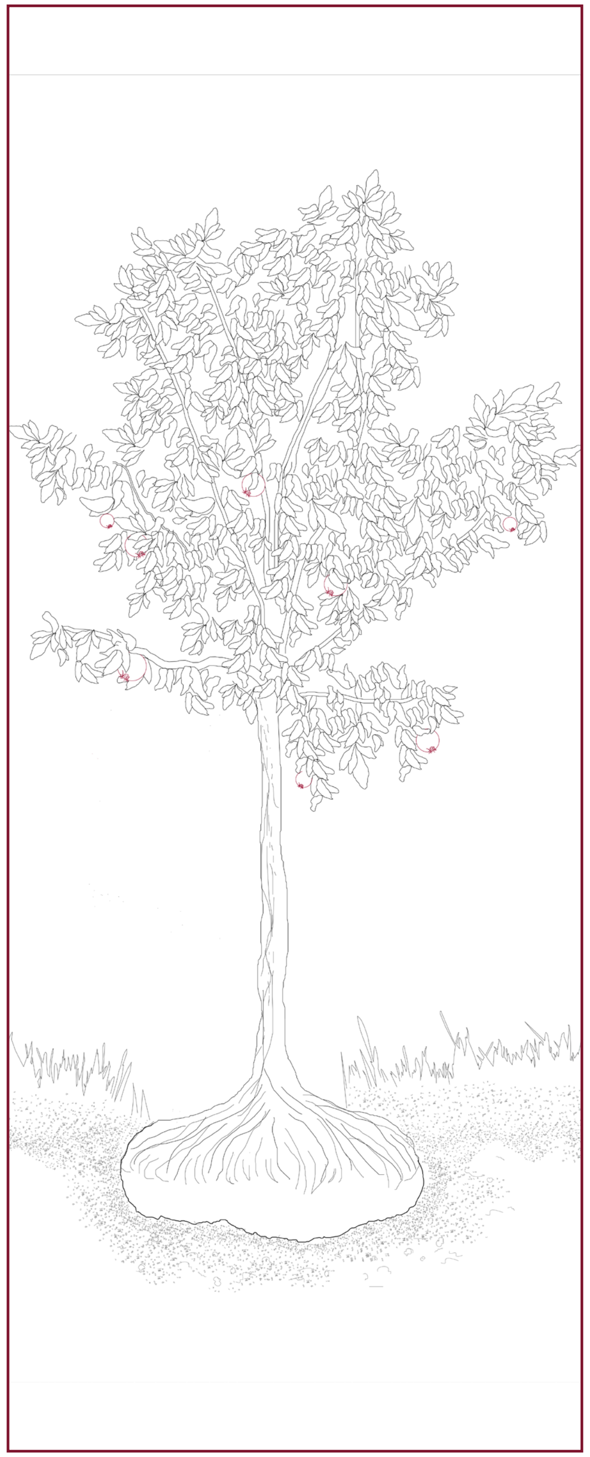




Cherry Blossom
Soil Retaining walls placed to force roots downwards, avoiding interference with foundations/utilities

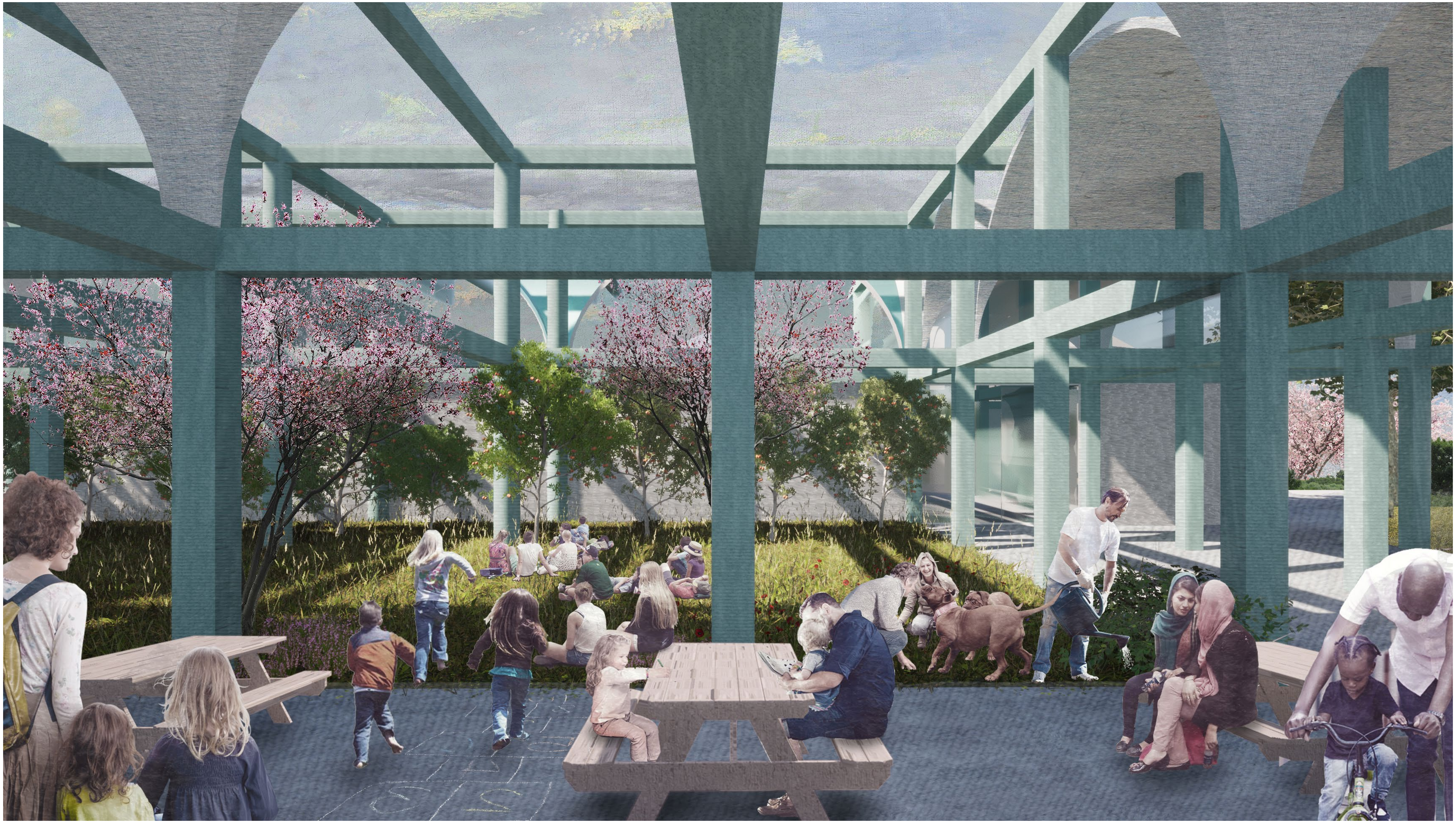


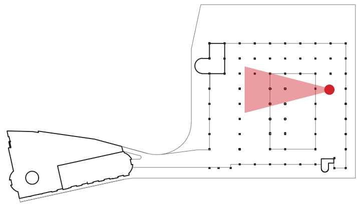
London Plane Trees (existing)
Invasive Roots may require changing of foundations over time, as roots can cause cracking in the concrete



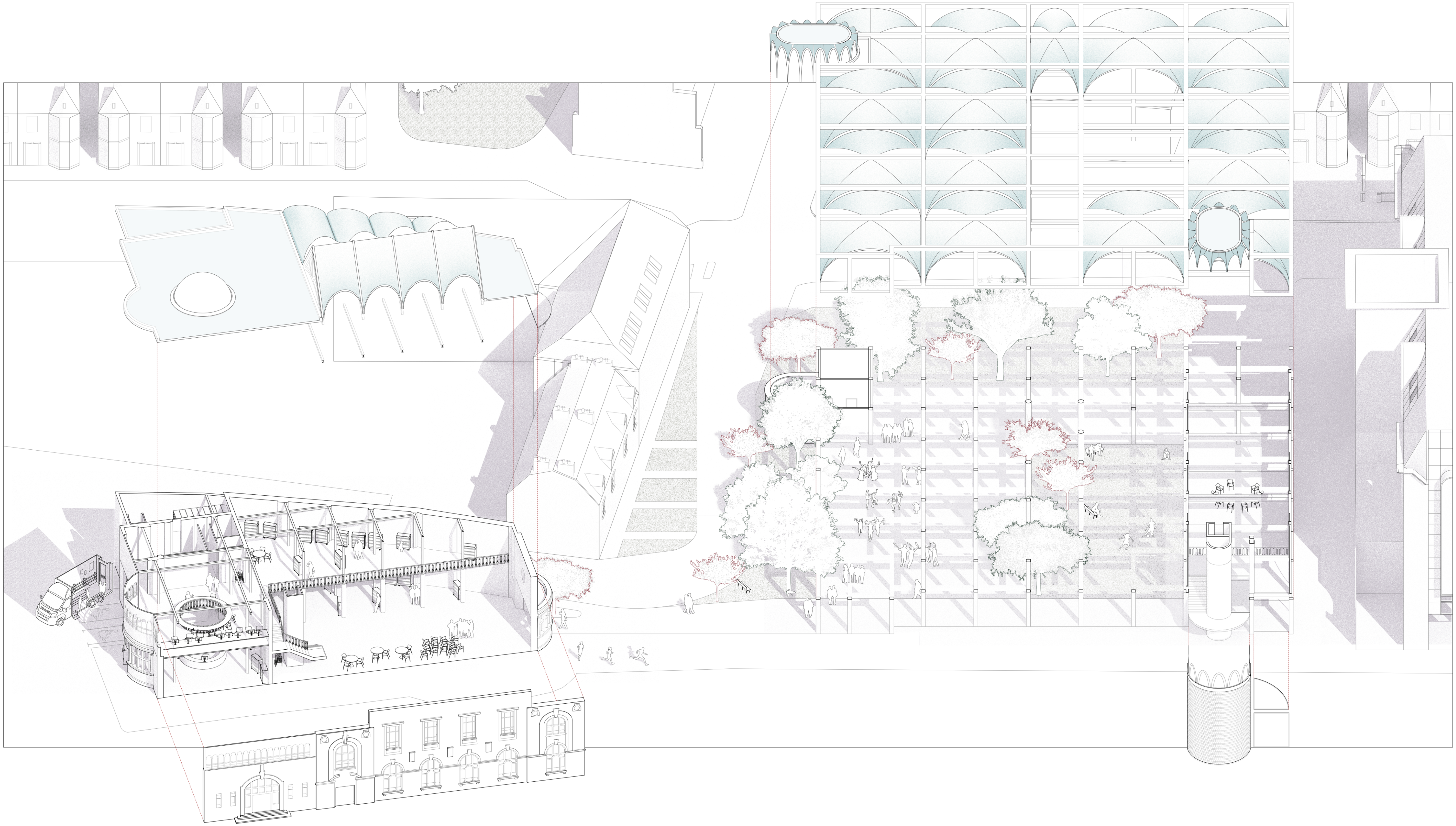
Pomegranate Trees
Trees are nurtured in Tree nurseries before being placed on-site with 'root-balls', Hessian sacks which bundle up the developing root systems

Hard and Soft Landscaping interaction

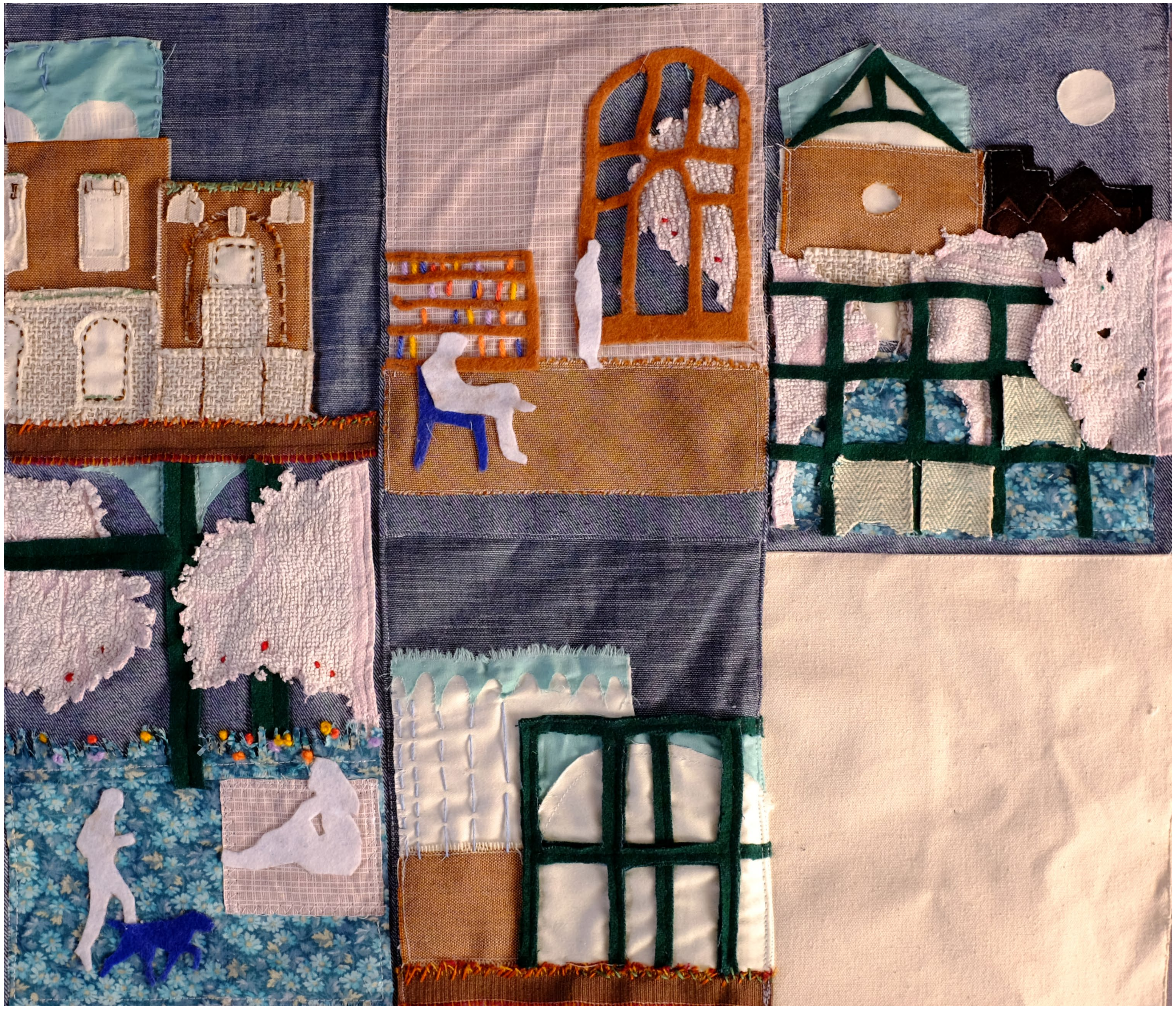




A new garden for the city



An unfolding patchwork of spaces



An open ended development

A Patchwork Palimpsest